

古い！
レトロゲームの必須ガイド
retro GAMER
AMSTRAD | COMMODORE | SEGA | NINTEND
CLAIR | NEO GEO | SONY | CO
集団教育
WE TAKE A TRIP TO THE NATIONAL VIDEOGAME ARCADE
ベスト 25 PC ENGINE GAMES
メイキング
SPACE HARRIER
THE LEGENDARY YU SUZUKI REVISITS HIS ARCADE CLASSIC IN OUR WORLD EXCLUSIVE INTERVIEW
他には
■ ALLEYKAT
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ISSUE 145
レトロ調査
ACORN ELECTRON
DOES THE BUDGET MICRO STILL PACK A PUNCH THREE DECADES ON?

THE RETROBATES

FAVOURITE PC ENGINE VIDEOGAME



DARRAN JONES

While the conversions of *Strider* and *Shinobi* were impressive, it's *Castlevania: Rondo Of Blood* that truly blew me away.

Expertise:
Juggling a gorgeous wife, two beautiful girls and an award-winning magazine

Currently playing:
Resident Evil Zero

Favourite game of all time:
Strider



NICK THORPE

It's got to be *Galaga 88* – I'm pretty sure my university essays suffered from my relentless pursuit of high scores…

Expertise:
Owning six Master Systems (I sold one)

Currently playing:
SolForge

Favourite game of all time:
Sonic The Hedgehog



PAUL DRURY

I was reminded how much fun *Parodius* is when I spied in on a PC Engine at a retro show recently. And I'm still hoping to try *Gekisha Boy* one day…

Expertise:
Quoting Ralph Waldo Emmerson

Currently playing:
Journey

Favourite game of all time:
Sheep In Space



MARTYN CARROLL

R-Type, although I've been playing the *Splatterhouse* series recently and the PC-Engine version of the coin-op is spot on.

Expertise:
Sinclair stuff and 8-bit gaming in general

Currently playing:
Teslagrad

Favourite game of all time:
Jet Set Willy



DAVID CROOKES

Gekisha Boy was a fantastic photo-'em-up, which rewarded players with extra film and better cameras. Snap it up!

Expertise:
Amstrad, Lynx, adventures, Dizzy, and PlayStation (but is it retro? Debate!)

Currently playing:
Grim Fandango

Favourite game of all time:
Broken Sword



JASON KELK

Wow, which shooter to pick… Okay, I'll go for *Super Star Soldier*, just because I've always enjoyed it.

Expertise:
Being a homebrew hero

Currently playing:
Scout

Favourite game of all time:
Io



GRAEME MASON

I love *Splatterhouse 2* on the Mega Drive so one of my favourites on the PC Engine is the original game.

Expertise:
Adjusting the tape azimuth with a screwdriver

Currently playing:
Resident Evil: Revelations 2

Favourite game of all time:
Resident Evil 4



PAUL DAVIES

I was considering one just for *R-Type*, then the Mega Drive was announced and we thought 'a better version is will come out for that!' But it never did.

Expertise:
Repeatedly banging my head against a brick wall

Currently playing:
Destiny

Favourite game of all time:
Ghouls 'N Ghosts



ANDREW FISHER

DonDoko Don, a superb Taito arcade game that translated brilliantly to the PC Engine.

Expertise:
30 years of gaming, C64 a speciality

Currently playing:
Beautiful Katamari

Favourite game of all time:
The Sentinel

LOADING…



Yu Suzuki is one of the most respected developers around. During the Eighties he created some of Sega's most iconic games and he continued to wow gamers throughout the Nineties with the likes of *Virtua Fighter*, Virtua Cop, and, of course, *Shenmue*.

While I'm a huge fan of many of his early 'super scaler' games, it's *Out Run* and *Space Harrier* that harbour some of my fondest arcade memories. *Out Run* felt completely different from virtually every other arcade game of the time, and so did *Space Harrier*.

With its insane speed, outrageous enemies, over-the-top bosses and exciting cabinet, *Space Harrier* was an joy to play and it was always one of the first games that I would pump coins into whenever I visited Poole Quay Amusements. Yes it doesn't really have that much depth but the thrills it delivered were unmatched and it remains a fantastically frenetic blaster to this day.

While Yu Suzuki's later games, particularly *Shenmue*, never spoke to me in the same way that his early hits did, the ambition of his projects will always impress me. It's gratifying to finally have him discuss one of his most beloved games. Hopefully you'll enjoy his insight as much as I did.

Enjoy the magazine!



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1959-2015 THE LEGACY OF SATORU IWATA

Retro Gamer celebrates one of gaming's greatest



The gaming community was dealt a huge blow in July with the news that Nintendo's president, Satoru Iwata, passed away. While it was known that he was suffering from a tumor on his bile duct, an operation in 2014 was thought to have been successful. Sadly, this was not to be and Nintendo revealed that he passed away on 11 July.

"Nintendo of Europe is mourning the passing of Mr Satoru Iwata, Nintendo's global president," began regional president Satoru Shibata's official statement. "It is difficult to put into words the sadness we feel at this time. Mr Iwata was a strong leader, a unique figure in the gaming industry and an important part of Nintendo's history. He was a visionary in every sense of the word and we will miss him dearly. Just as Mr Iwata challenged us to always push forward, we will that ensure his legacy lives on through our ongoing work to always surprise and delight our fans. At this time our thoughts are with his family."

The news of his passing sent a huge wave through social media, with many developers and gamers showing their respect, causing the hashtag #ThankYouIwata to explode online. Nintendo's rivals paid their respects, with Sony tweeting, "Thank you for everything, Mr. Iwata." Microsoft's Phil Spencer was also full of respect for the celebrated president, saying "Sad day for Iwata-san's family, friends, and gamers everywhere. His passion, creativity & leadership elevated our industry." Rare also had kind words for Iwata, tweeting "An incredibly sad start to the week. RIP Satoru Iwata. You had the respect of a world of gamers, including all of us at Rare."

> **"It is difficult to put into words the sadness we feel at this time"**
> Satoru Shibata



» [SNES] Iwata was instrumental in the success of *Earthbound*, jumping in to help the game's developers.

The respect for Iwata is well founded because he made a huge difference while presiding over Nintendo. He was the first ever president to not be directly connected to the Yamauchi bloodline (by birth or marriage) and was heading the company when it launched the DS and Wii, Nintendo's most successful consoles. That respect continued when Nintendo started to flounder on the rocks of success due to the troubled launch of the 3DS. In addition to giving away ten free games to everyone who had bought the handheld, Iwata also slashed his salary by 50 per cent. He refused to cut back on staff in 2013 when it was suggested to him by investors due to the disappointing performance of the Wii U and he again slashed his salary by 50 per cent in 2014 after the company's disappointing financial figures. He also realised the importance of Nintendo's huge fan base, directly

addressing the community through his numerous Nintendo Direct feeds, and delivering excellent interviews with developers in the form of numerous 'Iwata Asks' Q&As. In short, he simply didn't act like a typical president and CEO and many loved that about him.

For all his modesty, innovations and his willingness to put his staff first, it's the many games he was involved with that will continue to shape his lasting legacy on the industry. Unlike Hiroshi Yamauchi, Nintendo's previous president, Satoru Iwata actually started off as a game designer, and joined HAL Laboratory as the company's coordinator of software production in 1983. He received a Commodore PET as his first computer and quickly developed a love of coding that would see him be involved with a huge number of games at both HAL and Nintendo. The first game he created for the company was *Super Billiards* on the MSX, but many other games quickly followed. He programmed the popular NES game *Balloon Fight*, lent his programming expertise to the excellent SNES hit *Earthbound* and was involved with many of the *Kirby* games. By 1993 Iwata had been promoted to the president of HAL and helped turn the fortunes of the company around. He was also building a strong relationship with Nintendo, with the publisher publishing many of HAL's games.

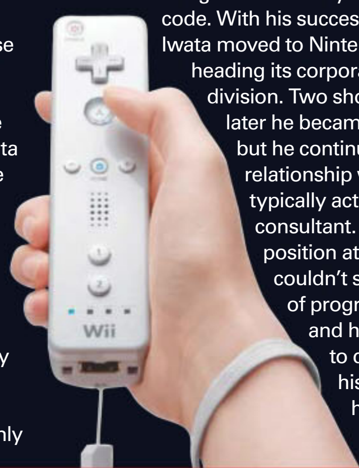
When Iwata saw that *Pokémon Gold & Silver* only contained the Johto region, he felt players would feel short-changed, so he used heavy compression techniques to include the entirety of Kanto. He pulled a similar stunt for *Pokémon Stadium* when he ported battle logic from *Pokémon Red & Green* to the console without the aid of reference documents by simply reading the Game Boy's source code. With his success at HAL, Iwata moved to Nintendo in 2000 heading its corporate planning division. Two short years later he became president, but he continued his relationship with HAL, typically acting as a consultant. Even his high position at Nintendo couldn't stop his love of programming and he continued to dabble with his first love, happily debugging *Super Smash Bros. Melee* in its final weeks of production and fixing Nintendo Land's mini-game *Balloon Trip Breeze* when he saw that something wasn't quite right with it during a patrol of Nintendo's shop floor. Iwata's love of both coding and gaming (he went out to personally buy *The Legend Of Zelda: Ocarina Of Time* on its day of release) is summed up best during his 2005 GDC keynote speech where he revealed the following information: "On my business card, I am a corporate president. In my mind, I am a game developer. But in my heart, I am a gamer."

Nintendo has announced that Genyo Takeda and Shigeru Miyamoto have been named as representative directors in lieu of Iwata's passing, but it's unclear if either will become president. What is clear is that Iwata leaves a legacy behind him that his successor will have a hard time living up to.

Rest in peace Satoru Iwata.



» Many scoffed at the DS when Iwata first revealed the touch screen-based handheld. The range went on to shift over 150 million units.



THANKS FOR THE MEMORIES

Developers pay tribute to Satoru Iwata

■ Sad Day. Satoru Iwata has passed. I was lucky enough to be interviewed by him. He knew way more about dev than me.
WARREN SPECTOR

■ Nintendo's flag is of course at half-mast today.
DYLAN CUTHBERT

■ So sorry to hear about Mr Iwata's passing. He was an unbelievable mind and talent, a passionate creative force. May he rest in peace.
ZELDA WILLIAMS

■ Please. I don't understand.
MARKUS PERSSON (NOTCH)

■ R.I.P. Iwata-san. My all time favourite video game is *Balloon Fight*. Thanks…
SWERY

■ In my heart forever.
HIDEKI KAMIYA

■ He was a man who understood *Pokémon* and a great leader. I will pray for his soul from the bottom of my heart.
JUNICHI MASUDA

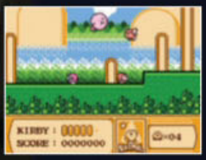
■ First time I met Mr. Iwata, I was on a visit to NCL, he was this crazy excited young guy who ran HAL. Super nice, and a great dev. I'm sad .
KEN LOBB

■ Whenever Mr. Iwata was in the office, he'd change his 3DS StreetPass message to "Hello NOA!" Was a company president that cared.
ANDREW KELLY



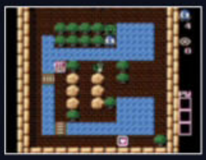
IWATA HELPS

Nintendo's president has been involved in many great games…



KIRBY'S ADVENTURE
(producer)

■ Kirby's only NES outing is a good one, building upon the mechanics first introduced in his original Game Boy game. It's also the first game to allow Kirby to steal an enemy's abilities once he's sucked them up.



ADVENTURES OF LOLO
(executive producer)

■ Based on HAL's *Eggerland* series, *Adventures Of Lolo* is an interesting maze game that has you moving around the single screen stages collecting the hearts that will unlock the next stage.



SUPER SMASH BROS. (producer)

■ It might look a world away from the cartoony visuals of the more recent *Smash Bros.* games, but the original is still fantastic fun to play. It's a rather simple looking game, but one that holds a surprising amount of depth.



METROID PRIME
(executive producer)

■ Despite a tumultuous development period, *Metroid Prime* became perhaps the most important game in the *Metroid* franchise. It's an adventure through and through and remains one of the Nintendo's finest games.



NINTENDO LAND
(executive producer)

■ Packaged with the Wii U console, *Nintendo Land* is a decent collection of mini-games that are based on some of Nintendo's most popular franchises. A version of Iwata's *Balloon Fight* is one of the available games.

BATTLEZONE RETURNS

AFTER SECURING THE BATTLEZONE IP, REBELLION'S CEO, JASON KINGSLEY, WANTS TO UPDATE IT FOR A NEW GENERATION. JOINED BY DESIGNER STEVE BRISTOW HE EXPLAINS WHY GAMERS WILL LOVE BATTLEZONE VR

What was your first experience of *Battlezone*?
Jason Kingsley: I first set my eyes on a *Battlezone* cabinet in an old-fashioned, sticky-carpeted, cigarette-smoke-stinking games arcade. The place was terrible but the game was awesome, you were 'there' not just playing a videogame.

Steve Bristow: I remember it well, too – an arcade in Mevagissey, probably as run down and crappy as Jason's. I can remember thinking that the game was meant for grown-ups because it was really tough and hard to control.

What did you like about the game?
JK: The periscope display really made you feel like you were inside a game world. Not controlling your little spaceship or player character remotely. That was revolutionary at the time.

How did it feel when you secured the *Battlezone* IP?
JK: Mainly tired. Tired and jet lagged! I remember being awed by the place the auction was held in. First and foremost, though, I was very excited indeed about the possibility of owning the game I played in my childhood, and what that meant.

Do you own the rights to all six *Battlezone* games?
JK: We do now. We bought the original arcade *Battlezone* and everything that is connected to that at auction, and negotiated for the later titles shortly afterwards.

Will the original game be included as an Easter Egg?
JK: We don't know at this point in time, but it's an idea that we have, of course, been discussing…



» Steve Bristow and Jason Kingsley are excited about *Battlezone VR*.

You have given the new *Battlezone* game a distinctive retro look. Is this intentional?
SB: There are lots of reasons for it. The premise of the game; making it a homage to the original, what works well in VR and what doesn't, most of all, though, it's about feel. The concepts just captured the virtual world that *Battlezone* put in my head.

What new gameplay mechanics can we expect to see?
SB: I should probably steer clear of specifics at this time, but there will be many facets to the gameplay ranging across the action and the larger structure of the game. What we have shown so far is really only a snippet, and much of what the game will be still hasn't been decided.

So why choose VR?
SB: Above all else, our version of *Battlezone* has to give you that feeling of childlike exhilaration, of transportation into another world. It is very pleasing to me to see people take the head-mounted VR display off, to see that look in their eyes and to think 'welcome back'.

What can you tell us about the available game modes?
JK: Honestly, very little. One thing we can say is that we're considering and exploring multiplayer – but VR is such new ground for us and every studio that it's hard to commit to too much at this early stage. We're still learning what works and what doesn't.

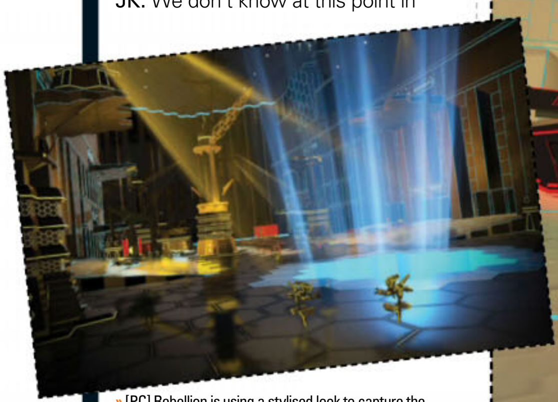


» [PC] We are loving the look of *Battlezone VR*. It has a distinctive *Tron* vibe throughout.

You're also remaking Activision's 1998 version of *Battlezone*, how did that come about?
JK: To be clear, we're working on a remaster of the 1998 game. It's not something we planned to speak about this soon as it's still in very early stages. But after we revealed the VR *Battlezone*, we saw a lot of fans wanting to know what was happening with the Activision RTS games.

How much pressure is there, knowing you have two separate fan bases to keep happy?
JK: Normally we try to make the best game we can. The fans and players of both will decide if we've made the right decisions or not, by buying it and enjoying playing, and for most people that'll be enough.

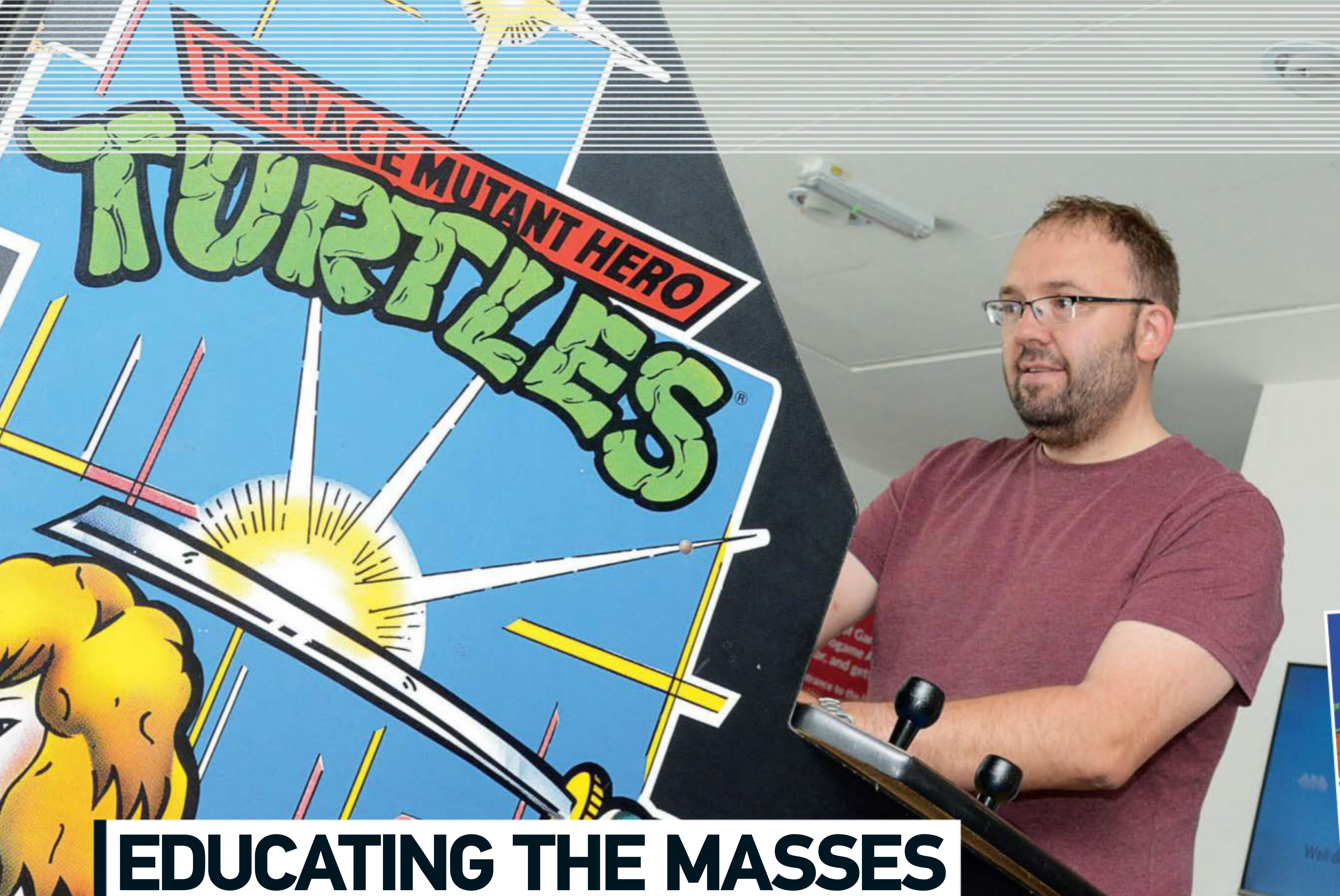
SB: I'm of those fan bases so I have a supply of my own pressure. *Battlezone VR* has got to stand as a great game and offer something new but I am confident that fans of the original are going to feel at home with it too.



» [PC] Rebellion is using a stylised look to capture the essence of the arcade original. We like it.



» [PC] In addition to *Battlezone VR*, Rebellion is also working on a HD update of Activision's *Battlezone* RTS game.



EDUCATING THE MASSES

IAIN SIMONS EXPLAINS HOW THE GAMES OF YESTERDAY ARE TEACHING THE CHILDREN OF TODAY



Photo of Iain Simons © Sam Kirby

» Iain Simons is also involved with GameCity, currently celebrating it's tenth year.

During our visit to the National Videogame Arcade something magical happened. We watched a group of young children get introduced to some old games and they were absolutely captivated with them. No one was moaning about the primitive graphics, or that the games looked washed out on the newer resolution screens – they were just having fun, and it was a joy to see. Some of the credit must surely go to Tom, the enthusiastic guide who was conducting the tour, but we'd also argue that it's because a great game is a great game, regardless of its age.

Iain Simons, the co-founder of the National Videogame Arcade seems to know this better than anyone, and he's surrounded himself with a like-minded group of people — including ex-Traveller's Tales staffer, Jonathan Smith — to create a living breathing window into our favourite hobby. As a result the centre is a lovely marriage of the old and the new, with *Mario Paint* sitting proudly next to *LittleBigPlanet* and arcade hits such as *Track & Field*, *Ms. Pac-Man* and *Teenage Mutant Ninja Turtles* sharing floor space with *Trials Fusion*. "It was really important that [these games] were next to each other," explains Iain. "We think games are games."

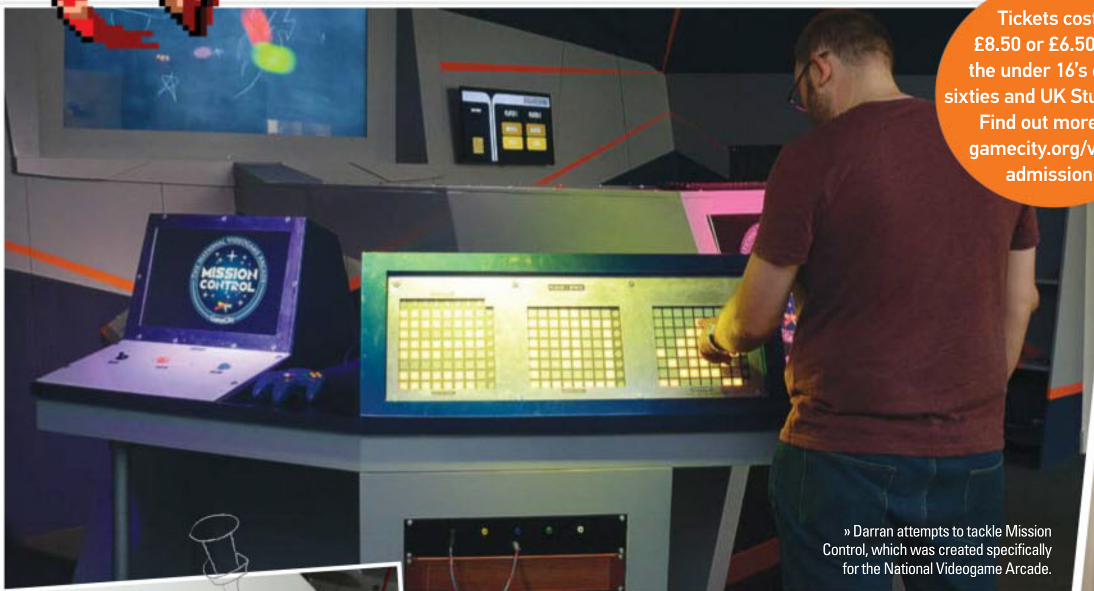
While this eclectic range of games certainly isn't going to be for everyone (anyone expecting an arcade filled with just arcade machines is going to be severely disappointed) it gives you a great insight into videogame's rich and varied history, particularly the third floor's 'A History Of Videogames In 100 Objects' room. It also allows you to get a better understanding of how games are made and, crucially, why they're so important.

While Nottingham seems like an odd location for such a collection of gaming paraphernalia it becomes a lot more obvious when you realise that Iain is also involved with GameCity, the city's fantastic game's festival that's currently in its tenth year. "In 2008 with Nottingham Trent University and the National Media Museum we founded the National Videogame Archive," begins Iain. "It's the UK's permanent national collection, which you own, which everyone owns, of videogame ephemera, of hardware, of software. It's a research project, which has been preserved. It's really important that that stuff is being preserved for the future." Although it's preserved for the future it's usually stored in warehouses, typically being dragged out for the purpose of the festival and placed back in storage. Clearly, this wasn't a great use for all the cool stuff that Iain and his team have collected; the festival needed a more permanent home, a home where the public could appreciate it throughout the year. A conversation with Jonathan Smith saw a new plan crystalising, and it was a good one…

"About a year and a half ago I was talking to Jonathan Smith,



» The lobby has a number of games available to play, all on free play as well.



» Darran attempts to tackle Mission Control, which was created specifically for the National Videogame Arcade.

Tickets cost £8.50 or £6.50 for the under 16's over sixties and UK Students. Find out more at gamecity.org/visit/admission



» There's a board in the lobby that shows what games are available.



» The 'Jump' gallery has the amazing *Sonic The Hedgehog* mural. Various versions of the game run alongside it.

"We wanted to show that this is old stuff, this is new stuff, and this is completely unique stuff"
Iain Simons

who at that time was still at TT," continues Iain. "He's come to every festival and has been a critical friend and spoke at them. It sort of seemed inevitable that if you want to do something different, more permanent, you need heat and light and your own place to do it. More than anything else, institutionally and culturally, we have a home [here]. At the computer museum there's some brilliant work that's been done from a research point of view and there's some great stuff that's been done with the Game On exhibition and what the Barbican did. There's been some brilliant stuff that's been done that's been touring work but there hasn't been a single place that goes: 'You know what? This is important because games are important and they're interesting and its like [knocks desk] bricks and mortar.' It's like a thing. We wanted to claim that space and help to lead in that space. It seemed inevitable really that transient things like festivals would lead to buildings."

The building that houses the National Videogame Arcade is an impressive one. Located close to the centre of Nottingham it's a huge three-story building that's been divided into three separate galleries, which are filled with classic games, as well as new creations like Mission Control, a huge console that's been designed to show those using it how games are created. Before you can enter the galleries however you can get a taste of what's inside by visiting the lobby, which is filled with arcade games, an Atari 2600 and the rather excellent Pitch Car, which isn't a videogame, but still needs to be experienced. We were interested to know if the free lobby was a way to get people into the paying part of the gallery. "That's right, it's a gateway drug," laughs Iain. "We wanted to create that taste where you can come to the lobby and you can play *Pac-Man* and you can play *Track & Field*, but you can also play *Trials* and you can also play *Dash And Bash*, which is a new game that was made for this building. So we wanted to show that this is old stuff, this is new stuff, and this is completely unique stuff that you haven't seen before. You can try the stuff out and you can have a cup of tea and get some toast. We used to have the turnstiles at the bottom of the stairs, which sounds stupid right, but we're learning as we go along."

That learning process has seen resulted in three very different areas, culminating in a final floor that features a cinema, the ability to play crazy peripheral-based games such as *Steel Battalion*, *Donkey Konga* and *Sega Bass Fishing* and a packed room that shows the history of gaming in 100 items, from the Magnavox Odyssey, to Hideo Kojima's business card. "For Gallery One we always wanted ▶



» All aspects of videogame history can be found at the National Videogame Arcade, regardless of how successful it was.



» Darran attempts to set a new world record on *Track & Field*. He doesn't succeed.

retroradar news

NATIONAL VIDEOGAME ARCADE HIGHLIGHTS

Some of the coolest things you can see



MISSION CONTROL

■ There are numerous standalone games and projects that have been created by staff and coders. One of the most interesting is Mission Control, which enables you to create sprites and change other aspects of the game on the fly.



DONKEY KONG

■ There's a range of arcade cabinets available to play, but *Donkey Kong* was our favourite. We particularly love the stand in front of the cabinet, which ensures gamers of all ages can reach and enjoy it.

SIGNED ZX SPECTRUM

■ There are a number of cool items to be found at the arcade, but our favourite is definitely this one. It's a pristine ZX Spectrum that's been signed by none other than Matthew Smith.



A HISTORY OF VIDEOGAMES IN 100 OBJECTS

■ Okay so this is cheating, but it's one of the coolest aspects of the arcade. You basically step into a large room and get transported back in time due to all the amazing items in there.





DOOM II MASTER DISC

■ Here's the *Doom II* master disc from 1994. It's signed by all key members of the team and is a fascinating heirloom. We can only imagine what sort of money this might fetch online…

▶ to build what Jonathan would call a 'Brontosaurus' you know, like a thing that sort of states what it is, so Mission Control was conceived as being this game that would show you how games are made. People can play the game while it is being changed by others. It is largely to show games as being a creative thing. Gallery Two is a temporary exhibition where we will look at a certain theme and we wanted to take something quite broad and conceptual, so it's all about jumping. Hopefully it will get people to think about what jumping means in videogames and how it relates to real life and that sort of thing it's probably the most didactic one of the lot I suppose. By the time we got to Gallery Three, we wanted to make something that was a bit more [like an exhibition.] It surprises me how long people spend in the 100 Objects room – which is brilliant.

Even though the structure of the gallery is fairly constant the items themselves aren't as anchored. "Jump stays the same but we change the games around," beings Iain. "Mission Control basically stays where it is, but we move the creative games around. We change them every few weeks or more often than that if something isn't working. Similarly in the 100 Objects room and the Interface room we change those around a lot. Partially because we want people to come back and it will be different for them, but also it changes the experience. It's not finished, we don't really expect it to ever be finished, but it's great that you can reiterate and change things. It feels like sculpting a thing and changing a few little bits."

It's obvious that the National Videogame Arcade has a lot to offer to audiences, particularly for those that aren't as well versed in games. Although its name feels misleading at first, Iain soon offers an explanation for those expecting a more traditional arcade. "'Arcade' seemed like the most helpful and slightly provocative title to give it," explains Iain, "so we wanted to reclaim what arcades are. They were public places and they were places were people could come together [and play games], that's the key reason why this is a place. The point about this is that it's a place where people can come together and experience new things in like the Victorian sense of an arcade where we could discover amazing new machines you won't have seen before." After watching a pair of teenagers stare at a Magnavox Odyssey before scrambling off to play *Guitar Hero 3*, we're inclined to agree with him. ✱



» There are a number of different home computers you can play on. Darran naturally sought out the Amstrad CPC.



» The National Videogame Arcade's mission is to make interacting with games fun. We'd say they've succeeded.



Here's my bio... Paul Davies

In 1992 I started out on *Mean Machines Sega* and *Nintendo Magazine System*. In 1995 I became editor of *C&VG*. I led the *C&VG* website from 1998 until Christmas 2000, then I left journalism to be concept design manager at Criterion Games. I returned to journalism in 2002 and from 2005 I've been running my own company, Unlikely Hero.

Screen Break

The pretty colours, bright lights, energising soundtracks and tangible feedback from sticks and buttons all lose their sheen after too long in the gaming saddle. It's hard to take a break, though.

I have just moved house, and it was a nightmare. My *Halo* books got creased, my game boxes got dented and I've no idea which box contains my pile of shame… which, okay, is probably for the best. Also beneficial, what I'm telling myself to feel better, is that the moment I get everything connected again, the sights and sounds are going to be so amazing. I'll be carrying on from where I left off, but it'll all seem new again. I'm looking forward to that moment of absolute 'wow'.

Ever make somebody a mixtape? I haven't done this in yonks (too old), but what I remember most fondly is listening to it all back and thinking, 'Oh wait until they get to this part!' I'd know these songs inside out, listened to them ridiculous amounts of time, but imagining a best buddy or sweetheart encountering, um, the bass guitar opening to Iron Maiden's *Wrath Child*, for the first time would be sort of spine chilling. Yes, I put Maiden on mixtapes for potential lovers. Yes, we stayed friends instead.

So, anyway, this is the same feeling I get when seeing or playing my favourite games after taking a break for a while. And even more so if the break was enforced; like the inconvenience of important family occasions such as Christmas, or weddings, birthdays or… maybe I just need to wake up and sort out my priorities.

The one game that sticks out from memory is Acornsoft's *Labyrinth* for the BBC Micro. I mean, even seeing the loading screen with the red, green, yellow and blue logos made me happy. Each time I'd load this up (Ferguson mono tape recorder) I'd be dazzled by the insanely delicate patterns and rich colours on these extremely detailed slices of water melon. Every day this could seem like new to me. In fact, I just looked it up in Google and I want to play it again.

Another comparison, based on moving house: most of us have a bath or take a shower every day. Some days we don't because we woke up late or we can't be faffed because we smell okay anyway. But if you're in a job where you come home caked in crap, or in my case spent 24 hours carrying dusty boxes and bin liners without taking a wash, a shower or a bath feels like the greatest thing ever. Like, the world is a better place and you can go back out there and fight. So, coming back to playing *Elite* after an extended break was like that shower you took after standing in a field all day, sprayed by bottles of pee and jumped all over at Donnington.

Last point on why it's worth taking a break every once in a while: there was once a US magazine called *Video Games And Computer Entertainment*. It took gaming very seriously. One month the editor's blurb was about how practicing little and often improved your performance faster than extended gameplay sessions. So, not only did games look incredible, you played better too. Ah, those carefree days before EXP. *

What do you think?

Do you agree with Paul's thoughts? Contact us at:

RetroGamerUK | @RetroGamer_Mag | retrogamer@imagine-publishing.co.uk | www.retrogamer.net/forum



Darren Melbourne

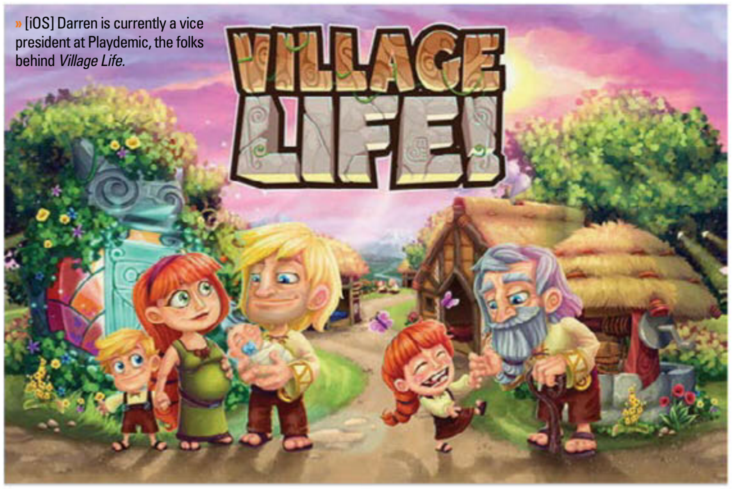
Paul Drury asks Darren Melbourne about Antstream, the cloud-based retro gaming service

Will Antstream essentially be like Spotify for old games?
Yes, exactly! It's a streaming service for retro games on every platform. As you and your readers are aware, you can go onto the internet and download games on emulators with varying degrees of success. Our idea is to correlate all of the classic titles in one place and offer them at a fee-to-play or a free-to-play basis, depending if you want them as an ad-free or ad-supported service. We recognise this big outcry when nobody gets paid for their work and we'd like to address that.

Wouldn't that make it hard to reward the people who actually wrote the games?
30 years in the industry has given me a unique insight into who owns what. I've spent the last 15 years licensing retro brands and when the rights have been lost in the mists of time, I can usually track them down.

Why will your service succeed when similar ventures have failed?
If you cast your mind back to GameTap, they tried to unify everything under this glitzy brand that you had to be sitting in front of your PC to use. What we will offer is something that plays on iOS and Android devices as well as Windows devices and we plan to add other gameplay features that will appeal to the retro gamer.

How did you get involved in the games business?
When I was studying for my A-Levels, I decided I could write games better than those available and I was absolutely proved wrong! I wasn't a natural games programmer. My maths let me down but my English was much better, so I moved into game design, production and business development and left the coding to smarter people than me.



» [iOS] Darren is currently a vice president at Playdemic, the folks behind *Village Life*.

> **"Antstream will correlate all of the classic titles in one place"**
> Darren Melbourne

What has been your proudest achievement so far?
Getting the C64 Direct-to-TV joystick on the shelves. It's one of the hardest things I've ever had to do.

Was the C64 your first computer?
I think you'll find it's the *only* computer. I did start out with a ZX81 and then a Spectrum but I remember a guy called David Page who ran a local computer shop showed me *Falcon Patrol* and explained what sprites were and that just blew me away. I was sold.

What's been your biggest disappointment during your career?
We'd done the Game Boy version of *Populous*, which had garnered pretty much 90% review scores, and we'd also done a NES version but the console was near the end of its life and a commercial decision was made not to release it. That was an awful lot of work and a miraculous piece of coding that never saw the light of day.

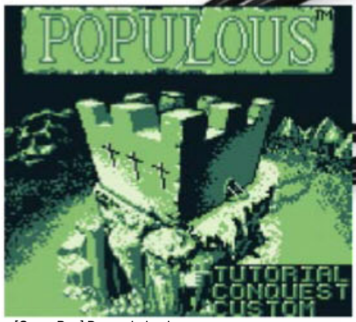

» [Amiga] Darren was a game designer for the cute real-time strategy title, *Tiny Troops*.

Which other industry veteran do you admire?
It's unfair to limit it to one person as I admire so many of my contemporaries but I'll say Jon Hare. *Wizball*, *Cannon Fodder*, *Sensible Soccer*... need I say more?

Can you recommend one of your games for our readers to play.
The Addams Family: Pugsley's Scavenger Hunt on the NES, which we did for Ocean, I thought was brilliant. Really playable and fun. And our current game, *Village Life*.

You seem very committed to the retro gaming cause. Why the enduring love?
We all like a connection to easier times. Before videogames became the powerhouse industry it is now, back then we just did it for the love. That was the time I enjoyed working in the business the most. My fondest memories are sitting with my friends playing *Manic Miner* and *International Karate* and *Lemmings*... it is difficult for me mentally to move on from those times. *


» [NES] The creep and kooky *Addams Family: Pugsley's Scavenger Hunt*.



» [Game Boy] Darren helped squeeze *Populous* onto Nintendo's portable handheld.



» The plug and play C64 DTV joystick is one of Darren's proudest achievements.

Collector's corner

Readers take us through the retro keyhole

BIO



NAME: Justin Hickman

ESTIMATED VALUE:
Value is relative. To me, priceless!

FAVOURITE CONSOLE:
SNES

FAVOURITE GAME:
I have 3: *Super Mario World*, *Final Fantasy VII* and *The Legend Of Zelda: The Ocarina Of Time*

Our collector this month is 33-year-old Justin Hickman from the West Midlands. Justin has been collecting for many years with his love of gaming starting with the Commodore 64 and Nintendo Entertainment System back in the late Eighties. "After that, I enjoyed the classic Nintendo versus Sega rivalry at school," he says, "although I was impartial as I had both a Mega Drive and a SNES." Justin pauses before admitting mischievously, "OK the SNES was clearly better…"

Like many collectors, Justin has converted a spare room in his house to his collecting. The majority of his collection is on display, and very nice it looks too. But what does his family think of it? "My wife tolerates it," he admits, "but my kids think it's really cool and love to show their friends when they come over." Nostalgia-wise, the Nineties is Justin's fondest era. "It saw the birth of so many great systems and with no internet, all you had for your gaming fix was *GamesMaster* on Channel 4 and the monthly gaming magazines. It all made an upcoming game much more of an event." And as you may have guessed from his earlier comment about the SNES, Justin falls firmly into the Nintendo camp. "For me, Nintendo first-party IPs are some of the best, most consistent and genre defining games ever released. Nintendo may have lost its way with the Wii-U, although that system is a vastly underrated machine in itself, but there is something special about playing a Nintendo first-party IP that not many other games are able to achieve."

Justin also has a special affinity with Japanese gaming. "In the Nineties, the best games came out in Japan first, and sometimes never in the UK," he says. "Japanese gaming allowed me to play games I normally wouldn't be able to in full 60hz. I remember getting PlayStation *Metal Gear Solid* imported from Japan and a Japanese Saturn just so I could play *Radiant Silvergun*." Condition is also paramount to Justin, and most of his consoles are in excellent condition, especially considering he has owned them from new. *



SONY PLAYSTATION
"It was groundbreaking at the time. Plus you had to have one to play *Final Fantasy VII*!"
PAID: £299

JAPANESE SEGA DREAMCAST
"I had this just after release in Japan, so long before its western release. *Sonic Adventure* blew me away, so did its arcade perfect *HOTD 2*. That's without getting into all the shmups and beat-'em-ups the DC enjoyed"
PAID: £RRP

NINTENDO ENTERTAINMENT SYSTEM
"I got this one Christmas and it introduced me to console gaming and Nintendo's first-party IPs. It came with *Mario Bros.* and *Duck Hunt* combo – I was blown away!"
PAID: £0



ZELDA COLLECTION
"My modest *Zelda* collection. It's far from complete and missing some key NES games, but it's coming on. It's one of my favourite all-time franchises."
PAID: £RRP



JAPANESE SEGA SATURN
"This console really opened my eyes to the world of gorgeous 2D sprites. It's a true must-have for 2D shoot-'em-up and fighter fans."
PAID: £RRP

JEWEL IN THE CROWN

THAT PIECE YOU CAN'T BE WITHOUT

SUPER NINTENDO



■ "It's an obvious one, but it has to be my SNES. I loved this console from day one and it's heavily peppered with nostalgia for me. From first party games like *Super Mario World* and *Mario Kart* to third-party games like *Mega Man X* and *Final Fantasy VI*, for my money there is no better system, although you need to have the 60hz switch as 50hz is just wrong!"
PAID: £150 (bought from new)

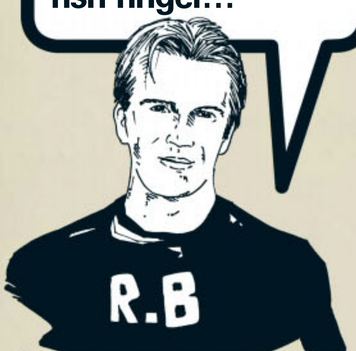
BACK TO THE NINETIES



» [PlayStation] *The Atari Collection 2* collated some rather enjoyable coin-ops of days gone by including *Crystal Castles*.

THE LATEST NEWS FROM AUGUST 1998

AUGUST 1998 – Sega reduces Saturn, Perfect Dark is underway, Tenchu assassinates the opposition, retro coin-op classics make a comeback while Deep Fear tests the water. Richard Burton mutates into a fish finger…



While the Dreamcast kept snatching pages in videogaming magazines, the Sega Saturn was on its last legs and nearing the end of its commercial life. Or was it? Sega lowered the recommended retail price to just £69.99 and suddenly it looked like an attractive proposition. The new price point only worked in the very short term, though, with the Saturn suffering a relapse of retail apathy and within months it was discontinued.

With *GoldenEye 007* for the Nintendo 64 picking up industry awards on a monthly basis it came as no surprise that Rare Ltd. was charged with producing a follow-up. This game would be entitled *Perfect Dark* and would continue with the theme of espionage combined with absurdly cool gadgets and weaponry. Although the *Bond* branding had been discarded, in truth it was never going to be a *GoldenEye* sequel, more of a spiritual successor to *GoldenEye*'s crown.

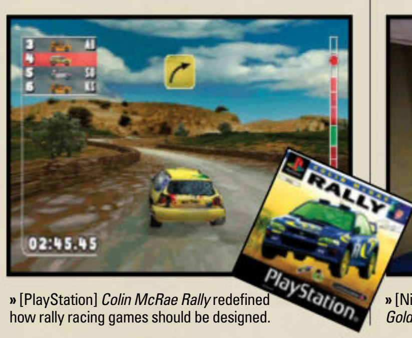
The main protagonist of *Perfect Dark* is Joanna Dark, a secret agent for a super secret organisation, the Carrington Institute. In what would become a superb 3D first-person shooter with emphasise on stealth, you must complete the set objectives by utilising your weapons and gadgetry to complete the stage. Unfortunately the proposed release date of summer 2000 meant a drawn out for gamers get their hands on Rare's new blockbuster.

There was more creeping about in the form of *Tenchu: Stealth Assassins* newly released on PlayStation. This action adventure, published by Activision, saw you sneak through ten tough levels as a ninja servant to your samurai lord, dispatching demons and the like with it culminating in a final battle with an evil sorcerer who wants to destroy your employer and his lands.

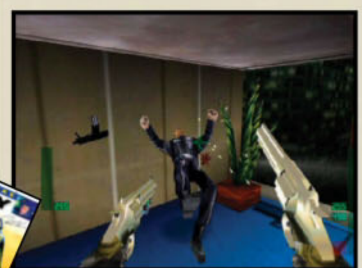
Tenchu had excellent graphics and music throughout with a variety of level designs illustrating the feudal Japan setting. *Tenchu* played like a cross between *Tomb Raider* and *Metal Gear Solid* and stands up well in gameplay terms to both of those classics.

Stealth appeared to be flavour of the month as the aforementioned *Metal Gear Solid* by Konami was very close to release. Gamers prepared for some top notch PlayStation gaming involving Solid Snake tippy-toeing around a nuclear facility, duffing up terrorists, rescuing hostages and stopping a nuclear strike. It was then home for spy tea and stealth crumpets.

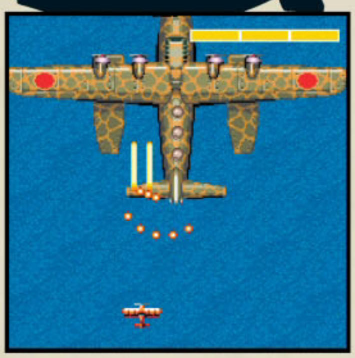
Out on PlayStation and creating skidmarks in all the right places was *Colin McRae Rally* by Codemasters. In what was more simulation than arcade racer, there was a choice of 12 cars (eight official cars complete with actual drivers), three skill levels and over 50 individual rally stages. The courses were



» [PlayStation] *Colin McRae Rally* redefined how rally racing games should be designed.



» [Nintendo 64] *Perfect Dark* was Rare's follow-up to *GoldenEye*. It was indeed quite dark but also perfect.



» [PlayStation] Capcom kicked off its coin-op compilation series with *Capcom Generations 1: Wings Of Destiny*.

THIS MONTH IN…

COMMODORE USER AMIGA

The Commodore mag had a small feature called Techno Tragedies which this month focused on the Konix Multisystem. It touched upon its trials and tribulations such as the lack of memory, huge price point, and a notable lack of third-party developers.



OFFICIAL SEGA SATURN MAGAZINE

Here we had an impressive trio of interviews this month. First up was Yu Suzuki who spoke about the Dreamcast. There was also the president of Treasure, Masato Maegawa, and Hiroshi Kataoka, the Sega AM2 director, talking about beat-'em-up *Fighting Vipers 2*.



COMPUTER & VIDEO GAMES

In *C&VG*'s Retro Ranch, there was a look back at the Intellivision and some of its better games. The controller was also a talking point with its swivelling 16-point multi-directional weirdness. Singled out for special praise was the game *Diner*, the sequel to *Burgertime*.





spread across the world with different terrains to pit your skills against. As such, you would have to set up your car appropriately after each race according to the conditions and road surface; a lot of tweaking of suspension, brakes and tyres was mandatory. There was also Rally School mode for you to hone your skills under the watchful eye of the great rally legend himself.

Graphically *Colin McRae Rally* was adequate but nothing spectacular and it was a similar story in the audio department. Where the game excelled was in the gameplay. As a rally game it was bang on point. It wasn't just a mad dash from start to finish, the courses were long, winding and hard to memorise which meant taking heed of your co-driver's invaluable instructions. *Colin McRae Rally* was fast and realistic with the cars handling beautifully.

There was another retro compilation released this month to keep us fans of all things old school happy. Arcade's *Greatest Hits: The Atari Collection 2* by Midway would see a like minded gathering of six of Atari's greatest coin-ops thrown together into one PlayStation compilation. The old school coin-ops appearing were *Paperboy*, *RoadBlasters*, *Millipede*, *Crystal Castles*, *Gauntlet* and *Marble Madness*. Not a dud among them, well, actually maybe *RoadBlasters*.

Capcom had news of more retro gaming compilations with the release of the first of five compilations for PlayStation and Sega Saturn. Capcom *Generation 1: Wings Of Destiny* contained three games ported straight from the arcade coin-op originals: *1942*, *1943: Battle Of Midway* and *1943: Kai*.

The five compilations would be released in Japan each month until the end of the year with a collection of the first four releases gathered together as a bundle for the European region.

New to the Saturn was *Deep Fear*, a survival horror game in the mould of *Resident Evil*. An unidentified object has crash landed into the Pacific and a submarine is sent to investigate yet it mysteriously crashes into the Big Table, a facility situated in the depths of the Pacific. Unluckily for the submarine and Big Table crew, a virus that mutates humans into unpleasant monsters is released. You play an ex-Navy Seal who must save the day and who is fortunate to be immune to the virus.

Your job is to save people, kill mutants and stop those pesky mutants from destroying the facilities oxygen supply. As with most games of the survival horror genre, creating the eerie foreboding atmosphere was key in the game's success. *Deep Fear* had this in abundance but rather than solely rely on a spooky and foreboding soundtrack, some tactfully placed periods of absolute silences really ramped the *Deep Fear*'s tension up.

Comparisons to *Resident Evil* were inevitable with its third-person perspective, similar tank controls, like-minded survival gameplay and graphical similarities. Sadly for the Sega Saturn, *Deep Fear* was to be its last ever European game release. *

AUGUST WORLD NEWS

2 August saw the start of the Second Congo War aka The Great War Of Africa. The war directly involved nine African countries, it lasted for just under five years and with a reported death toll of over five million people. It was the deadliest war on record after World War II.

Among the many great and varied music album releases this month, the stand out titles were *The Miseducation of Lauryn Hill* (Lauryn Hill), *This Is My Truth Tell Me Yours* (Manic Street Preachers), *Songs For Polar Bears* (Snow Patrol), *Severe Tire Damage* (They Might Be Giants) and *Da Game Is To Be Sold, Not To Be Told* (Snoop Dogg).

14 August saw the UK and US release of *The Avengers* in cinemas. It featured no superheroes or wise-cracking billionaire geniuses but, instead, the film was a resurrection of the camp spy television series of the Sixties. Ralph Fiennes would don the bowler hat as John Steed and Uma Thurman as fellow secret agent Emma Peel. The original Steed, the late Patrick MacNee, also had a small part as a voice actor in the movie. Unfortunately, *The Avengers* was universally regarded as a steaming sack of bum nuggets after flopping badly at the box office.

19 August saw the world premiere of the movie *Blade* based on the Marvel Comic anti-hero. It featured Wesley Snipes in the title role, the half-human, half-vampire who spends the vast majority of his time protecting the human race from bloodthirsty vampires.

CHARTS

AUGUST 1998

NINTENDO 64



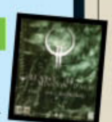
1. FIFA World Cup 98 (Electronic Arts)
2. Forsaken (Acclaim)
3. Goldeneye 007 (Nintendo)
4. Quake 64 (GT Interactive)
5. Yoshi's Story (Nintendo)

PLAYSTATION



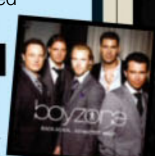
1. Gran Turismo (Sony)
2. FIFA World Cup 98 (Electronic Arts)
3. Resident Evil 2 (Virgin Interactive)
4. Men In Black (Gremlin)
5. Tomb Raider: Platinum (Eidos)

PC



1. Quake 2: The Reckoning (Activision)
2. FIFA World Cup 98 (Electronic Arts)
3. X-Files: Unrestricted Access (Electronic Arts)
4. Army Men (Ubisoft)
5. Tomb Raider: Unfinished Business (Eidos)

MUSIC



1. No Matter What (Boyzone)
2. Mysterious Times (Sash! featuring Tina Cousins)
3. Viva Forever (Spice Girls)
4. Pure Morning (Placebo)
5. Ghetto Supastar (That Is What You Are) – (Pras Michel Ft. ODB & Maya)



» [Sega Saturn] You're in deep water in *Deep Fear* when a mutant virus attacks and you're running out of air.





Chameleon Twist

"LOVING WOULD BE EASY IF YOUR COLOURS WERE LIKE MY DREAM"

#91

» JAPAN SYSTEM SUPPLY » N64 » 1997

A quirky 3D platformer with characters who are out of this world, how many times have we heard this type of description, particularly as a substitute for quality? Let's see if *Chameleon Twist* fits the bill. Quirky protagonist in the form of mutated chameleon Davy: check. Odd backdrops that are based on the insect and rodent kingdoms: check. Weird gameplay gimmick: check.

The aforementioned gimmick comes in the form of Davy's prehensile tongue. As soon as you shoot out the lizard's tongue, the analogue stick controls its direction, allowing you to draw in enemies to use as projectiles. The tongue can also act as a grapple to swing you between platforms, a tripwire for enemies, and even a pole to reach higher heights!

The game is very inventive, and definitely quirky. Where things start to fall apart, though, is in the game design – the worlds feel claustrophobic next to stablemates *Super Mario 64* and *Tomb Raider*, and the animation suffers from a very low frame-rate. That being said, the basic visuals are very pretty, and the music is far catchier than it has any right to be.

The multiplayer is an odd addition for a platformer, but adapts the game mechanics well. Davy and his chameleon friends, Jack, Linda and Fred, attempt to knock each other off pedestals with enemy ammunition. It's a simple addition, sure, but it does help to expand the traditional gameplay.

Overall, *Chameleon Twist* suffers only from over-reaching ambition, rather than not trying hard enough. The sequel is meant to improve on the original's faults, so I look forward to finding a copy in the near future!

BRENDAN JONES



Game Boy Camera



» **PLATFORM:** Game Boy » **RELEASED:** 1998 » **COST:** £11 (BOXED) / £7 (UNBOXED)

It's easy to forget that ridiculous selfies aren't a recent phenomenon, but one which emerged at the end of the Nineties – and it's all thanks to Nintendo's Game Boy Camera. At a time when digital cameras weren't yet commonplace, to say nothing of bolting them onto mobile phones, photography was an expensive endeavour for kids due to the need to buy and develop film. With a Game Boy Camera, users could run wild – up to 30 pictures could be stored at once and bad pictures could be painlessly deleted, thus making casual photography way more accessible to the system's young audience.

As a Nintendo product the Game Boy Camera needed a gaming angle, and it delivered. As well as being able to edit your pictures with silly stickers, a variety of mini-games were built into the add-on which incorporated the player's face into the action. These included some excellent retro references including the *Game & Watch* throwback, *Ball*, and the shoot-'em-up *Space Fever II*, in which you could fight your own face as a boss. The monochrome images might seem quaint today, but for kids in the late Nineties they created new excitement around a veteran piece of hardware. *

PERFECT PARTNER Game Boy Printer

Consider this one a example of Nintendo's ability to keep decade-old hardware relevant. Novelty photo-sticker booths had become all the rage in Japan during the late Nineties thanks to the arcade Print Club machines, so Nintendo wisely capitalised on the trend with a small thermal printer that allowed Game Boy Camera owners to print their pictures onto stickers. While it was a bit of a power hog, requiring six AA batteries and regular paper refills, the inch-high photo stickers it produced allowed you to build a cool scrapbook of faces in the days before Facebook.

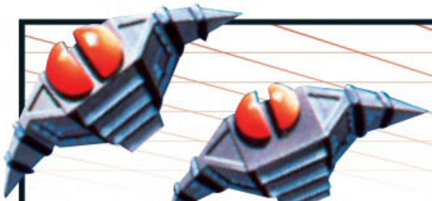




Camera Fact

■ The Game Boy Camera takes pictures at 256 x 224 – greater than the Game Boy's screen resolution! Images shown on the Game Boy screen are only show half of their actual detail as a result.

FOCAL LENGTH: 20cm
RESOLUTION: 256X224
COLOURS: 4
STORAGE: 30 Images





メイキング SPACE HARRIER

Back in the mid-Eighties, just one arcade game could claim to combine the thrills of a rollercoaster with the gameplay of a shoot-'em-up. Nick Thorpe joins Yu Suzuki for a return to the Fantasy Zone…

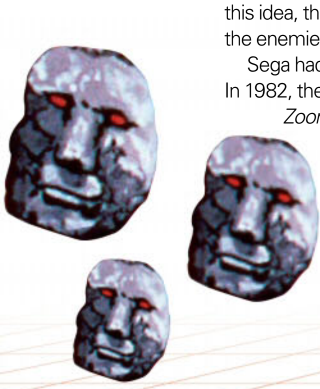
In the world of military aviation, the Harrier is an iconic piece of machinery. The incredibly successful craft gained the 'Jump Jet' nickname due to its unusual ability to take off and land vertically, negating the need for a runway. Within the world of videogames, Yu Suzuki's leap from obscurity to stardom was almost equally vertical. After performing coding duties on *Championship Boxing* for Sega's obscure early Eighties SG-1000 console, Suzuki designed the extraordinarily influential motorbike racer *Hang-On*, the first full-body arcade simulation game. With that completed, Suzuki then turned his attention to making a shooting game featuring the iconic aircraft.

"The original plan was supposed to be the military plane Harrier," the legendary arcade designer recalls, "there was not enough memory space for the graphics so we changed the format to science fiction. Thus we just kept the name Harrier and it became *Space Harrier*." No matter what the theme was, the road ahead was a rocky one. Simply tackling the idea of a 3D shooting game was pushing the boundaries, as Suzuki recalls: "There were no successful 3D shooting games before *Space Harrier*. Therefore when we submitted this idea, the 3D shooting genre was still taboo because the enemies were too small to hit."

Sega had experience in the field to back this up. In 1982, the company had released the arcade game *Zoom 909*, better known as *Buck Rogers: Planet Of Zoom* in the West. While it was a technically impressive game and one which was ported to practically every home system available at the time, its wide release had more to do with recouping the cost of the licence than arcade success. Both *Buck Rogers* and Sega's next 3D shooter, *Sub-Roc 3D*, shared the problem of small, hard to hit enemies. Other companies had offered shoot-'em-ups with 3D perspectives, such as *Tempest* and *Gyruss*, but avoided the problem by imposing limitations on movement and aiming. Suzuki and the *Space Harrier* team wished to allow for the same freedom as Sega's previous games, and found the key breakthrough that made it work in the game's original inspiration: "To solve this problem, we added the homing missile system like a real fighter aircraft and made it into an easy to hit shooting system."



» Yu Suzuki has been responsible for some of Sega's greatest arcade hits.



The other major advantage that *Space Harrier* had over *Buck Rogers* and *Sub-Roc* was the improved technology that had become available in the interim. "I had always thought about [creating *Space Harrier* with 8-bit technology]," Suzuki explains. "I was always interested in an algorithm for speeding up 8-bit technology." However, when the time came he didn't need to do so. Much like *Buck Rogers* was developed from technology originally used in *Turbo*, *Hang-On* had allowed Suzuki to work with 16-bit visual technology and *Space Harrier* was able to develop on that. But despite having access to cutting-edge graphics hardware, Suzuki remembers that the process was still subject to limitations. "There were loads of challenges, especially due to the fact that we were using line buffer at that time so we could not add many objects in line. Therefore we needed to come up with the solution by scattering the objects throughout the game."

With the technology in place, the look needed to be nailed down. It's not surprising that Suzuki had originally aimed for a realistic theme – given the simulation leanings of *Hang-On* and Suzuki's overall preference



SPACE HARRIER 101

■ *Space Harrier* is a shoot-'em-up in which the titular hero attempts to save the Fantasy Zone, home of the dragons, from evil creatures. The Harrier is permanently flying into the screen and must destroy any enemies in his path, while avoiding collisions with enemies and the projectiles they fire.



» [Arcade] *Space Harrier* is an incredibly vibrant game, with fast-paced action and beautiful colours.



IN THE KNOW

» **PUBLISHER:** Sega

» **DEVELOPER:** Sega

» **RELEASED:** 1985

» **PLATFORM:** Arcade, Various

» **GENRE:** Third-person rail shooter

for realism throughout his later body of work, *Space Harrier*'s sci-fi setting has always stuck out as a bit of an anomaly. But the game was using an huge amount of memory, so the team had to work around the restrictions by looking at where they weren't restricted. While they couldn't utilise a lot of sprite data, the team did have access to a palette of thousands of colours and was able to fling a lot of sprites around the screen.

"I liked the artist Roger Dean and the movie called *The NeverEnding Story*," explains Suzuki, "so I created the world as homage to them." The latter influence won't surprise anyone that has played the game, as the friendly dragon Uriah that features in the bonus stages is a clear shout-out to the film. The Roger Dean influence, while a little less obvious, is visible all over the game's surreal, beautifully shaded landscapes. Floating rock formations, towers and otherworldly wildlife populate the plains of stages like Amar and Minia. Other pop culture influences are visible too – the robotic Dom enemies are clearly modelled on their namesakes from the anime series, *Gundam*. The goal was to keep the game family-friendly, though – when asked about enemy concepts, Suzuki replies, "there were a few. [There were] ones which were too grotesque, we chose not to use them."

A key part of the *Space Harrier* look comes from the boss monsters, which were brought together in an extraordinarily short time span. "The thing was that we did not have very long to create the game," Suzuki tells us, "so we planned to create six bosses within three months, meaning we tried to create one distinctive boss every two weeks." This explains the use of regular enemies in boss designs, as well as the boss rush in the game's final stage. However, the distinctive bosses are easy to identify – the draconic first boss, Squilla, the two-headed skeletal beast, Salpedon, and the penultimate boss, Wi Wi Jumbo, are all examples of this process. The designs are marvellous examples of graphical economy, too. Bosses are typically made up of eight or more distinct sprites which move in sequence to give a 3D effect, but the vast majority of these are repeated sprites – see Squilla's body segments, or Syura's protective rocks.

The graphical economy stretches throughout the game, actually. The vast majority of objects have very few frames of animation, if any at all. If you look closely, the iconic one-eyed mammoths never animate mid-game, nor do the Ida stone heads. The enemies were large and extraordinarily colourful, but didn't actually do an awful lot visually. The gambit here involved movement – Suzuki's team essentially tricks the eye by having the enemies move around a lot and





TYPE
■ Three types of cabinet were created for *Space Harrier*: an upright, fixed sit-down and a full-motion cockpit.

BUILD
■ The actual cabinet was created by a company called Mechatronics and it was created separately. It wasn't until later that it was modified to work with *Space Harrier*.

ART
■ The Roger Dean-influenced artwork is absolutely glorious, showing off the first boss you encounter in the game.

SEAT
■ The seat is quite comfortable for short periods of time. Just be wary of numb bum after long sessions in it.

> **"I liked the artist Roger Dean and the movie called The NeverEnding Story, so I created the world as homage to them"**
> Yu Suzuki

stay on-screen for a very short amount of time. The game would need to be fast and active, or risk looking like a fight between cardboard cut-outs.

The outcome is of course well-known at this point – it worked spectacularly. *Space Harrier* was a powerful shock to the senses for any mid-Eighties gamer. It wasn't just smoothly animated and colourful, it was blazingly fast. While early enemies would circle around in the background to lower the perceived pace, it wasn't long before the Harrier started rushing headlong into herds of bouncing Loopers or dodging over and under waves of Binzbeans. The intensity of the experience is still present today no matter how you play it, but the sensation is heightened considerably if you can track down the motion cabinet, a feature which made *Space Harrier* into the centrepiece attraction of many an arcade.

The combination of *Space Harrier* and its moving chair might seem like a perfect marriage of software and hardware, but according to Suzuki it wasn't a major part of the plan. "The Mechatronics team was developing the cabinet separately. Then later on we modified it to suit *Space Harrier*," he explains. In fact, the *Space Harrier* team had only an advisory role at a hardware level. "When it came to modifying it, we discussed the cabinet's speed, durability performance and throttle's specification, for example. Of course we regulated the cabinet control system by ourselves."

The sound design of *Space Harrier* is another key part of the overall experience. The game's voice clips, though short and few in number, are iconic. Each game begins with a chirpy, "Welcome to the Fantasy Zone!" and most will end with a dying cry from the Harrier. "Get ready!" when you've just got up, and "You're doing great!" when a boss bites the dust. The source of these sounds has unfortunately been forgotten, but the composer of the music is still known. Hiroshi Kawaguchi handled this aspect of *Space Harrier*, and provided a range of tunes which evoked a spectrum of emotions. However, for most people a mention of *Space Harrier*'s music will bring to mind one tune – the theme which plays throughout the game.

For its time, it was an epic in terms of both length and ambition, running for almost three minutes



» [Arcade] The otherworldly scenery in *Space Harrier* was inspired by the artwork of Roger Dean.



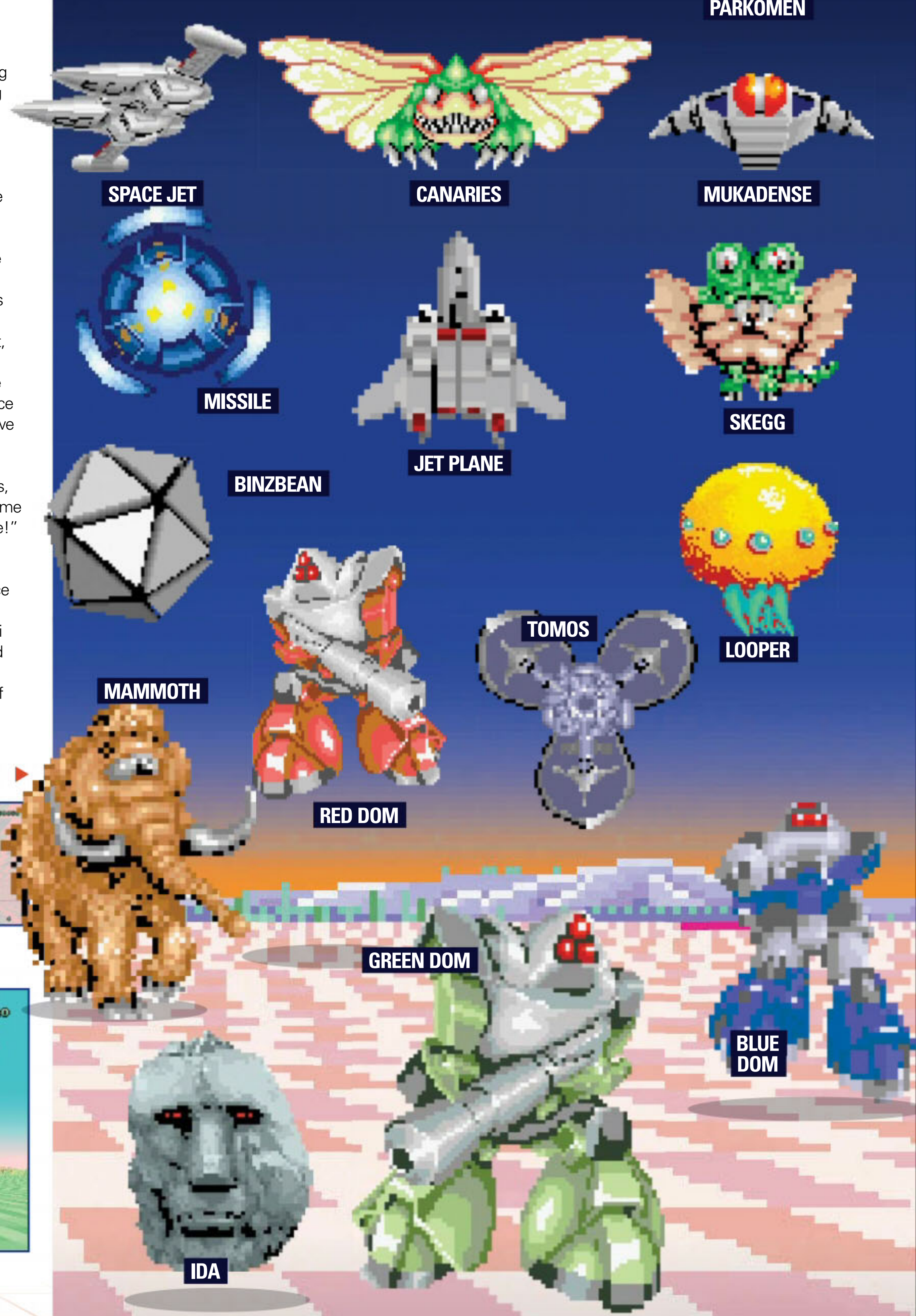
» [Arcade] At points, you'll be unable to destroy anything and have to resort to dodging.



» [Arcade] Colour schemes change for each stage, ranging from desert hues to oddly mechanical pastel landscapes.

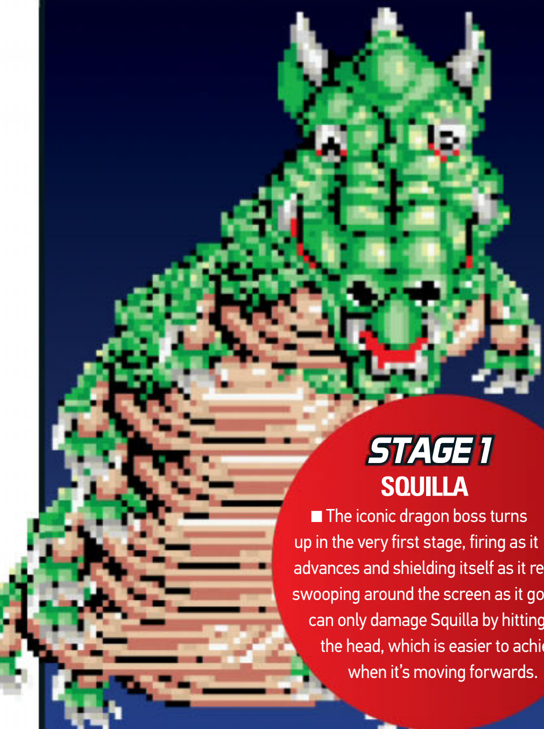
ピクセルパーフェクト

A selection of enemies to shoot down



ファンタジー フライト

It's hard to feel welcome in the Fantasy Zone when greeted by a group of mean creatures like this lot…



STAGE 1
SQUILLA

■ The iconic dragon boss turns up in the very first stage, firing as it advances and shielding itself as it retreats, swooping around the screen as it goes. You can only damage Squilla by hitting it in the head, which is easier to achieve when it's moving forwards.

STAGE 2
IDA

■ The stone heads that have pestered you throughout the level are back, orbiting a central one which needs to be destroyed. Once you've punched through, the orbiting heads will depart, making this an easier fight than the first boss in many ways.





STAGE 3
GODARNI

■ What could be worse than Squilla? A two-headed dragon, obviously! Godarni spits fireballs from both of its heads and, like Squilla, is vulnerable to being shot in the head. Whats worse is that both heads take damage independently – if one is destroyed, the other will continue to attack alone.



STAGE 4
DOM

■ These *Gundam*-style robots attack in formation, sticking to the flanks of the screen and switching sides with a big, arcing jump. There are only a few so the encounter is brief, but they're pretty fierce attackers so you'll want to dispose of them as quickly as you can.



STAGE 5
ROLLIES

■ The Rollies cluster up together and let loose a constant barrage of laser shots. Thankfully, they're easy to destroy – all you need to do is draw their fire away from where they're clustered with constant movement, so you can dive in for a few shots.



STAGE 6
TETRAHEDRON

■ This formation of enemies is a little troublesome, as each of its constituent parts can shield itself from damage – but much more quickly than the regular Tomos enemies. Keep circling in the opposite direction and blast away for the quickest path to success.



STAGE 7
SYURA

■ Your first variation on Ida features the same central stone head, this time orbited by a ring of floating rocks. Unlike the Ida fight, this ring doesn't scatter when hit, so you'll have to take it out in order to get to your target.



STAGE 8
DOM MKII

■ The giant mech is back, this time charging along the floor in the middle of the screen before going into a super-powered attack mode, denoted by flashing colours. As long as you know where it'll be, you can take it out before it becomes much of a threat.



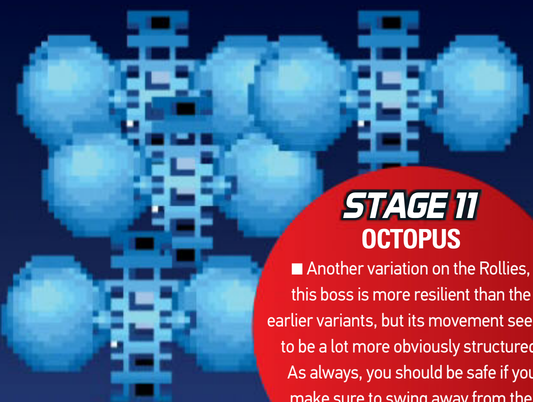
STAGE 9
TOMOS

■ Supremely irritating as regular enemies, the Tomos assemble as a boss. Like Rollies, they attack as a cluster so you'll have to make multiple passes to take your shots. However, they open and close just like normal, ensuring that actually destroying any individual pod is quite tough to achieve.

STAGE 10
SALPEDON

■ Hey look, Godarni died and enrolled itself in the skeleton war! It's another double-headed dragon to shoot in the heads, but this time it's a little bonier. While they don't change into a range of colours when shot, each head does get progressively redder until it dies.







STAGE 11
OCTOPUS

■ Another variation on the Rollies, this boss is more resilient than the earlier variants, but its movement seems to be a lot more obviously structured. As always, you should be safe if you make sure to swing away from the boss to draw fire before each attacking run.



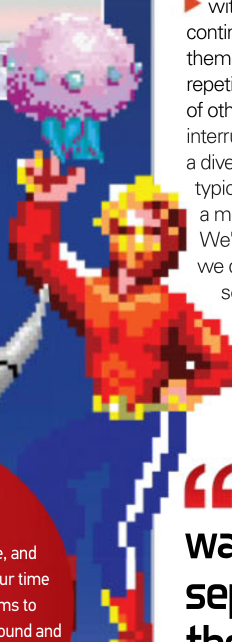
STAGE 12
BARBARIAN

■ Much like Syura, Barbarian is formed of a central head with a protective orbit of Loopers. Your tactics shouldn't vary a lot, in this case – shoot away the protective barrier and then blast it until it explodes. Are you starting to sense a pattern developing here?



STAGE 13
VALDA

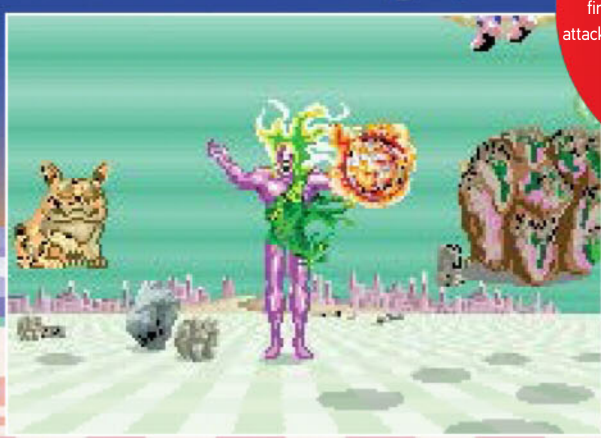
■ Valda is a pretty fearsome creature to look at, as it looks just like a skeletal Squilla. Perhaps unsurprisingly, it also attacks in the same way as Squilla, and is vulnerable to exactly the same tactics as the very first boss. Shoot it in the head until it goes away.





STAGE 14
STANREY

■ Stanrey is the giant aircraft here, and it is indestructible so don't waste your time firing upon it. It just spews out Doms to attack you, while jet planes swoop around and cause mayhem. Worse yet, this is the first boss battle in which regular stage objects like trees are still present.



STAGE 15
WI WI JUMBO

■ This guy starts off shielded, and is flanked by a pair of Komainn that will only go down when he does. Each Komainn will attempt to fry you with fireballs, while Jumbo himself will fling rocks at you until you are very dead. Ignore the small fry, shoot the big guy.



STAGE 16
HAYA-OH

■ This twin-bodied fire dragon wasn't in the original arcade game, but was added to the Master System conversion and has been present in various conversions since then. Its fast, twisting motion is unlike that of any other boss. Fun fact: Haya-Oh is named after former Sega president Hayao Nakayama.



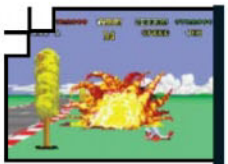
without looping. Despite the fact that it plays near-continuously throughout the game, the *Space Harrier* theme has enough variation that it doesn't become repetitive. However, the game also contains a number of other iconic tunes, including the boss tunes which interrupt the main theme. Once again, Kawaguchi takes a diverse approach to these encounters – Squilla gets a typically driving piece of boss music, but Ida relies on a mean bass line and Godarni's tune is almost sedate. We'd also be doing the game a massive disservice if we didn't mention the short, sweet and sad high score screen tune, White Summer.

For all we've talked about *Space Harrier* so far, much of the discussion has been about secondary factors – the graphical themes, the music, the cabinet – and little about the actual game design, beyond the solution to the

> **"The Mechatronics team was developing the cabinet separately. We regulated the control system"**
> Yu Suzuki

problem of small enemies that was crucial to getting the game off the ground. Would it be fair to say that the success rested on the game's unique technology, then? Yu Suzuki doesn't believe so. "The Super Scaler technology was important to increase speed, however if I think about how important it was for the game to succeed, I do not think it was that important." We'd concur. No matter how much of a thrill a game delivers, if the game doesn't come up to scratch, you'll never insert a second credit – and the game had to survive in stand-up cabinets as well as the motion models.

The novelty factor of a 3D shooting game was certainly a draw for players, but each element of the game was carefully considered. "I felt that a linear control system was suited better for the flying game," Suzuki explains when asked about the decision to use analogue controls over a digital joystick. It was important that the player could point and shoot with as few problems as possible, which meant giving the greatest degree of control possible. Also important was what the player was actually shooting, and *Space Harrier* presents enough enemy variations to keep a player on their toes. The game includes passive obstacles such as trees and floating rocks as well as active threats that move around and shoot you, giving the player a chance ▶



DEVELOPER HIGHLIGHTS

HANG-ON (PICTURED)
SYSTEM: Arcade
YEAR:1985

OUT RUN
SYSTEM: Arcade
YEAR: 1986

AFTER BURNER
SYSTEM: Arcade
YEAR: 1987



» [Arcade] Dom is an aggressive enemy, leaping about and eventually gaining the ability to fly.

to cause more carnage without greatly increasing the difficulty of the game. Then, of course, there's the distinction between the threats you can remove and the indestructible ones which needed to be avoided. "Having two types of objects makes the game more interesting and enjoyable," Suzuki tells us. "Also, by having this type of object, it creates amusing scenes such as the ball bouncing back like a pinball."

It's fair to say that *Space Harrier* was a simple game to play – after all, it's a twitch shoot-'em-up in which you can only move and shoot – but it's worth noting that there's a very solid, well- thought out design underpinning the entire experience. The first stage teaches you everything you need to know about the game. Obstacles on the ground aren't just scenery, but you'll be let off with a trip over the bushes, rather than being killed outright. Enemies are there to be shot, but when you try to attack a closed Tomos, you'll learn about the pinball-esque rebound that accompanies an ineffective shot.

Also, while shooting is advisable to reduce the number of projectiles, the fact that enemies always directly aim at the Harrier means that players can often get by simply by moving around the screen and taking care not to cross their own path too often. Combat is only forced in certain boss fights, when it is impossible to proceed without beating the enemy. This notion of elimination versus avoidance is played with throughout the game. In some stages, such as the sixth stage, Olisis, you'll be under constant fire but able to respond in kind. At other points, such as the beginning of the fourth stage, Ceiceil, nothing can be destroyed and the player's ability to control the Harrier is tested instead.

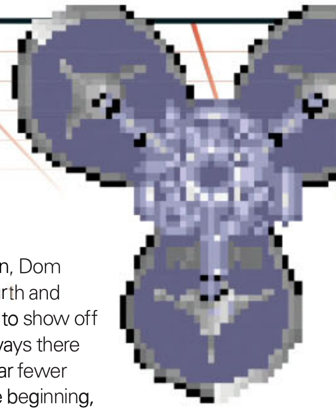
The game also smartly rations its surprises. There's always a reason to insert the next coin, as new enemies are constantly popping up. The two enemies that accompany the Harrier on the title screen, Dom and the mammoth, don't appear until the fourth and seventh stages respectively. The temptation to show off everything within the first few minutes is always there for arcade game designers, who know that far fewer players will see the end of the game than the beginning, but some of the most spectacular set-pieces are saved as a reward for players that go the distance. The assault by the mothership Stanrey is an excellent example, with Doms pouring out en masse to attack you.

When Suzuki is asked why *Space Harrier* has retained its appeal over the past 30 years, he is very

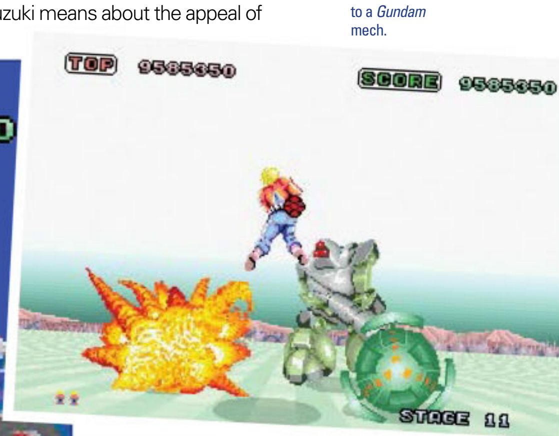
"I believe that this pleasant feeling of hitting the enemy is the most attractive part of this game"
Yu Suzuki

definite in his answer. "There are not many games like *Space Harrier*. And even now if you play it, it has good controllability and easy to take a steady aim and hit the enemy well," he explains. "I believe that this pleasant feeling of hitting the enemy is the most attractive part of this game." It makes sense. *After Burner* featured a lock-on system and as the 3D shoot-'em-up has developed over the last 30 years, in part thanks to Sega-made efforts such as *Panzer Dragoon* and *Rez*, many of them have taken inspiration from that system rather than *Space Harrier*'s direct approach. Even the *Space Harrier* spin-off, *Planet Harriers*, adopted lock-on shots.

However, when you go back and play *Space Harrier*, you'll see what Suzuki means about the appeal of







» [Arcade] Some conversions of *Space Harrier* have changed the Dom sprite, due to its resemblance to a *Gundam* mech.



» [Arcade] While some bosses receive multiple variants, others like Wi Wi Jumbo only appear once.

バトルシーン

Space Harrier's adventure in the Fantasy Zone was just the beginning of the fight…



SPACE HARRIER 3-D 1988

■ Just a year after the end of *Space Harrier*, the Dragon King passes away and a war of succession breaks out. Uriah is meant to take the throne, but his evil cousin has other ideas. This Master System exclusive shows off the 3D glasses well, but it is even jerkier than the system's original port.



SPACE HARRIER II 1988

■ Sega went back to the Fantasy Zone to demonstrate the power of the Mega Drive. Kotaru Hayashida helmed the sequel, which gave players a choice of starting level and a new hoverboard bonus stage. Versions also appeared for the Amiga, Atari ST, Amstrad CPC, Spectrum and C64.



SPACE FANTASY ZONE 1991

■ This unreleased PC Engine CD game is the link between the *Space Harrier* and *Fantasy Zone* series. It's a 3D remake of *Fantasy Zone* – Opa-Opa flies into the screen Harrier-style and takes on enemies from *Fantasy Zone*, with *Space Harrier* melodies and enemies mixed in for good measure.



PLANET HARRIERS 2001

■ Produced and directed by Toshihiro Nagoshi, this spin-off elaborated on the basic concept of *Space Harrier*. While players still controlled flying people with big laser cannons, this sequel featured brand new lock-on shots, power-ups, co-operative play and of course polygonal 3D visuals.



TYPING SPACE HARRIER 2002

■ You'd be surprised by just how well *Typing Space Harrier* can improve your speed and accuracy on the keyboard. However, we're still not sure why this Japanese PC game exists. We would have thought Sega had satisfied its urge to create a novelty typing game with *The Typing Of The Dead*…



hitting the enemy. In the first stage, the player is able to destroy every object they see, from the bushes and trees to actual threats, and it's an intoxicating feeling. Lock-on shooters have a certain rhythm – engage, aim, release, repeat – but *Space Harrier* has you frantically hitting the trigger as fast as possible. Even when the act of hitting enemies in regular play becomes much harder as the game progresses, *Space Harrier* offers respite in the unrestrained destruction of the bonus stages, in which you pilot Uriah into trees for extra points.

Interestingly, despite the fondness he clearly feels for the game, Suzuki has had very little involvement with *Space Harrier* in the 30 years since the game was released. When the time came to convert the game to the Master System, the job was left to Mutsuhiro Fujii and Yuji Naka, who added a final boss and an additional ending sequence to give the game a more satisfying conclusion – improvements which have been added to subsequent conversions. The next time Suzuki visited the 3D shooting genre in 1987, technological advances meant that he was able to finally realise his vision of a game based on a fighter jet with *After Burner*, a game which further developed the genre.

Of course, *Space Harrier*'s success meant too much to Sega for the series to go away, so the series was left in the care of other Sega staff. In fact, the series has attracted some of Sega's most notable staff members over the years – *Sonic The Hedgehog*'s character designer Naoto Ohshima, *Alex Kidd In Miracle World*'s planner Kotaro Hayashida and *Super Monkey Ball*'s director Toshihiro Nagoshi have all left their stamp on the series through various sequels. Suzuki has only ever returned to *Space Harrier* by including it in the *Shenmue* series, though there's clearly a lot of love for the game on display – you can take a break from Ryo Hazuki's quest for vengeance to actually play *Space Harrier* in the arcade, and even collect figurines of the game's characters from capsule toy machines.

That's not to say that Suzuki wouldn't like to revisit *Space Harrier*, though. "I was happy that *Space Harrier* was brought back on 3DS," Suzuki says, referring



» [Arcade] Clever use of movement camouflages the fact that many enemy sprites have little animation.

to the recent release *3D Space Harrier*. "However I wish I could have created a totally new *Space Harrier* by myself to be honest," he adds with a laugh. While Suzuki's current commitments may prevent him from working on a new *Space Harrier* for the time being, we wouldn't rule it out entirely. Prior to beginning work on *Shenmue III*, Suzuki's studio, Ys Net, oversaw the mobile games *Virtua Fighter Cool Champ* and *Virtua Fighter Fever Combo*, which shows that he's sincere about revisiting Sega's past successes and that Sega is willing to let him do so.

It's a tantalising thought, too. Between his love of breaking new ground and mastery of arcade game design, it's easy to imagine Yu Suzuki pulling off something special were he to return to *Space Harrier* Until then, the prospect will have to remain confined to our own fantasy zones. *

Special thanks to Maiko Hinson for her translation work, Masae Nakagawa for the introduction, and of course, Yu suzuki for his precious time



フライト旅程

Space Harrier first took flight in the arcade, but landed on a number of home formats too. Here's a look how the conversions fared…



MASTER SYSTEM 1986

■ Sega's first attempt at converting *Space Harrier* retains most of the action due to clever use of graphics hardware, but loses a lot of the speed of the arcade version, and scrolling isn't smooth. On the other hand, a brand new final boss and a proper end sequence were added.



ZX SPECTRUM 1986

■ Elite got the international computer rights for *Space Harrier*, and got to work on conversions quickly. The Speccy features smooth object movement, but the visuals aren't pleasant. It's too hard to make anything out, which unfortunately mars the gameplay experience quite a bit.



AMSTRAD CPC 1986

■ We're pleased to see the Amstrad given a distinct conversion of the game, but it's unfortunately not brilliant. The full-colour graphics appear great, until objects start to appear as simple wireframe outlines, which makes it quite hard to hit your targets with any degree of consistency.



FAMICOM 1989

■ Takara's conversion features clean visuals and smooth sprite movement. However, the trade-off is that the game's sprites are small and flicker heavily. Completists should note that the boss Haya-Oh makes another appearance here too.



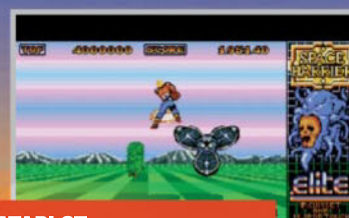
AMIGA 1989

■ The Amiga version of *Space Harrier* is very playable. The game uses an updated version of Elite's graphics set with better colours, does away with the vertical bar on the right of the screen, runs more smoothly and has better quality music.



PC 1989

■ Imagine the Atari ST version of *Space Harrier*, but with a slideshow frame-rate that ensures delivery of fireballs to your face with no warning. You might as well strap on a jetpack and fly face-first into a rock yourself.



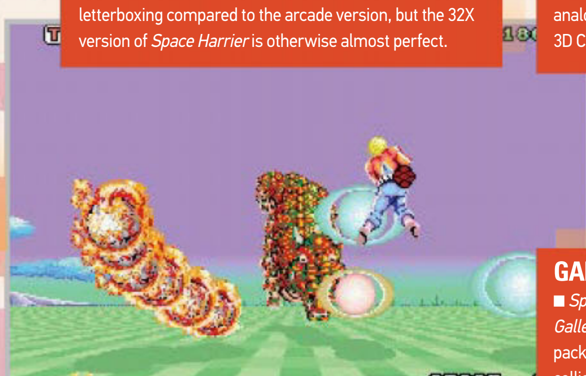
ATARI ST 1988

■ Elite's first 16-bit version of *Space Harrier* is certainly an odd one, as its fully redrawn visuals mean that it looks pretty good without looking authentic. It certainly plays well too, with the mouse offering a good analogue control scheme.



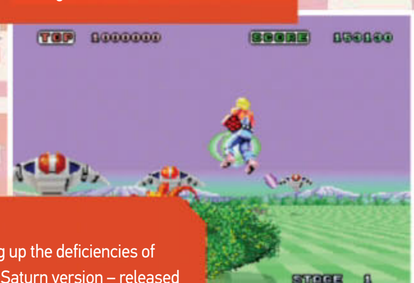
GAME GEAR 1991

■ Despite being based on the Master System conversion, the Game Gear version of *Space Harrier* is a rather unique beast. The game has been shortened to 12 stages, enemies were redrawn in a more organic style, and there's a brand new password facility.



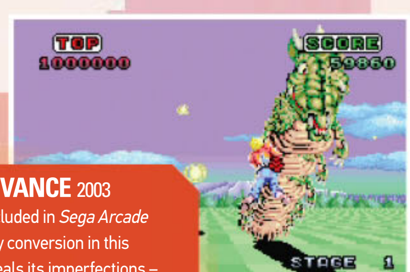
32X 1994

■ Sega's decision to promote its new add-on with an old game might have been questionable, but it's a great conversion. There's a little slowdown and some letterboxing compared to the arcade version, but the 32X version of *Space Harrier* is otherwise almost perfect.



SATURN 1996

■ As well as cleaning up the deficiencies of the 32X version, this Saturn version – released with the *Sega Ages* collection – offers analogue control via the Mission Stick or the 3D Controller, giving it a boost in authenticity.



GAME BOY ADVANCE 2003

■ *Space Harrier* is included in *Sega Arcade Gallery* and, like every conversion in this pack, it gradually reveals its imperfections – collision detection feels off and the Harrier's speed doesn't feel right in fast or slow mode.



COMMODORE 64 1987

■ The C64 got its version of *Space Harrier* a little later than its 8-bit competitors, but the wait was perhaps worth it. Enemy sprites are rather basic and the object movement is very choppy indeed, but it's at least easy to see what you're meant to be doing.



FUJITSU FM77AV 1987

■ Sega handed the Japanese computer rights to Dempa Micomsoft, which delivered a range of interesting conversions. Fujitsu's FM77AV received a version which compared well visually with the Master System version, and had a very good rendition of the iconic theme tune.



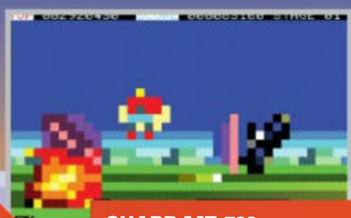
SHARP X68000 1987

■ The X68000 handled *Space Harrier* beautifully, as you'd expect from such a powerful machine. It's a fast, smooth conversion which even boasts the Master System version's added boss and end sequence. This was the definitive conversion for a long time.



PC ENGINE 1988

■ Dempa Micomsoft also handled the PC Engine version of *Space Harrier.* It's a very good conversion, with a good sense of speed and nice object movement. It's visually quite similar to the X68000 version, but with fewer colours and simulated scaling.



SHARP MZ-700 1988

■ This homebrew port by Kazuhiro Furuhata was officially approved by Sega for publication in the Japanese Sharp format magazine *Oh!X*, as part of their 'Not Impossible On MZ-700' series. It's actually rather playable, but the visuals are *incredibly* abstract.



SHARP X1 1988

■ Sharp's machine bests the NEC competition by retaining the speed and playability while adding extra colour and detail, thanks to its use of character graphics for some objects. For some players, it might even be preferable to the Fujitsu version.

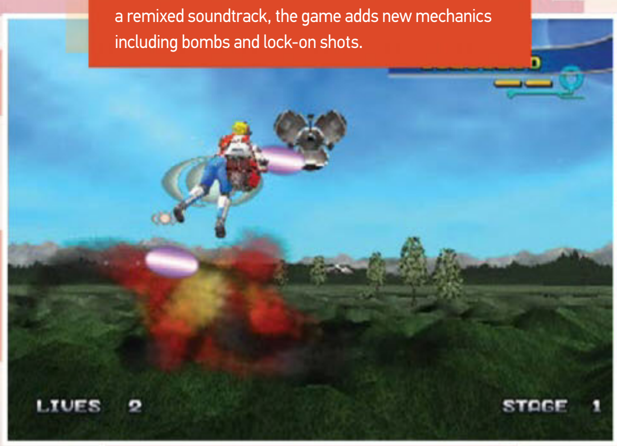


NEC PC-8801 1988

■ While it is mechanically faithful to the arcade game and is rather fast and playable, the PC-88 version of *Space Harrier* does have one major limitation – most objects are rectangles! NEC's PC-6001 received a similar version with fewer colours and sprites.

PLAYSTATION 2 2003

■ This enhanced remake of the original arcade game appeared on *Sega Classics Collection*, and as a stand-alone release in Japan. As well as polygonal graphics and a remixed soundtrack, the game adds new mechanics including bombs and lock-on shots.





ATARI 8-BIT 2011

■ It's not an official conversion but we couldn't help but mention this homebrew conversion by Chris Hutt and Sal Esquivel. To see such smooth movement and hear authentic sounds from Seventies hardware is incredible.

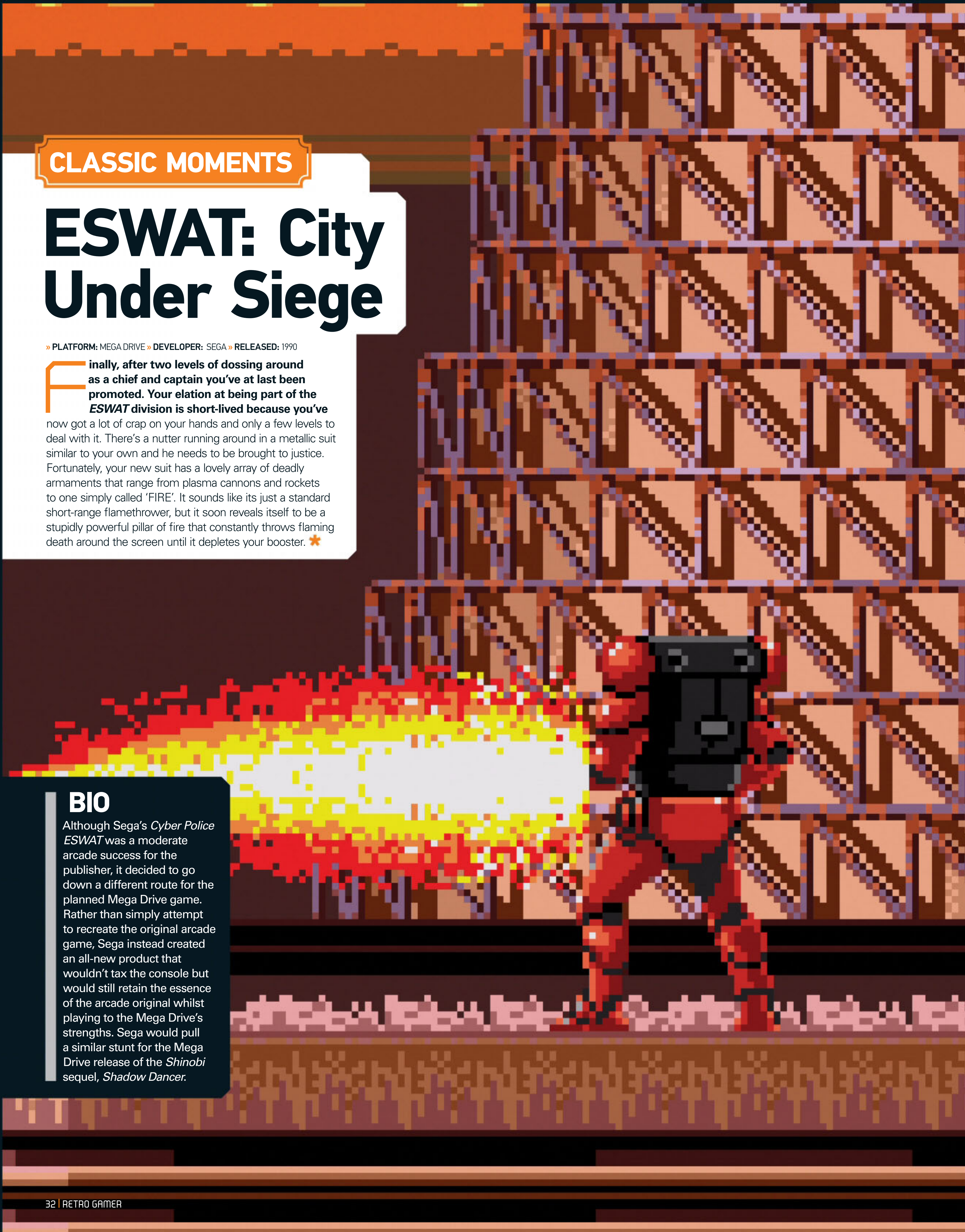
3DS 2012

■ *3D Space Harrier* was released as part of M2's *3D Classics* range, and adds stereoscopic visuals to enhance the experience. The game features Haya-Oh and loads of customisation options, making it one of the best versions out there.



AND THE REST…

■ The arcade version of Space Harrier is also emulated on compilations for a variety of platforms. These include *Yu Suzuki Game Works Vol 1*, *Shenmue* and *Shenmue II* for Dreamcast, *Shenmue II* for Xbox, *Space Harrier II: Space Harrier Complete Collection* for PS2 and Mega Drive *Ultimate Collection* for PlayStation 3 and Xbox 360.



CLASSIC MOMENTS

ESWAT: City Under Siege

» **PLATFORM:** MEGA DRIVE » **DEVELOPER:** SEGA » **RELEASED:** 1990

Finally, after two levels of dossing around as a chief and captain you've at last been promoted. Your elation at being part of the *ESWAT* division is short-lived because you've now got a lot of crap on your hands and only a few levels to deal with it. There's a nutter running around in a metallic suit similar to your own and he needs to be brought to justice. Fortunately, your new suit has a lovely array of deadly armaments that range from plasma cannons and rockets to one simply called 'FIRE'. It sounds like its just a standard short-range flamethrower, but it soon reveals itself to be a stupidly powerful pillar of fire that constantly throws flaming death around the screen until it depletes your booster. *

BIO

Although Sega's *Cyber Police ESWAT* was a moderate arcade success for the publisher, it decided to go down a different route for the planned Mega Drive game. Rather than simply attempt to recreate the original arcade game, Sega instead created an all-new product that wouldn't tax the console but would still retain the essence of the arcade original whilst playing to the Mega Drive's strengths. Sega would pull a similar stunt for the Mega Drive release of the *Shinobi* sequel, *Shadow Dancer*.

MORE CLASSIC ESWAT: CITY UNDER SIEGE MOMENTS

Helicopter Havoc

As with the *Shinobi* series, *ESWAT* likes to mix up its bosses with a mixture of organic and metallic foes to battle. The first boss you fight is a helicopter that's made trickier to combat due to its erratic attack patterns. Also, you've not been promoted to the ESWAT division yet, so you have to take it down with the equivalent of a peashooter.



Prison Break

The second level sees your wannabe ESWAT chief heading into a prison, which is teeming with inmates who don't take kindly to visitors. Initially, you'll have to make your way to the prison's zenith on a floating contraption, but you'll soon have to leave it behind so you can continue on foot. Just watch out for ball-swinging brutes and stray bullets.



Bust The Boost

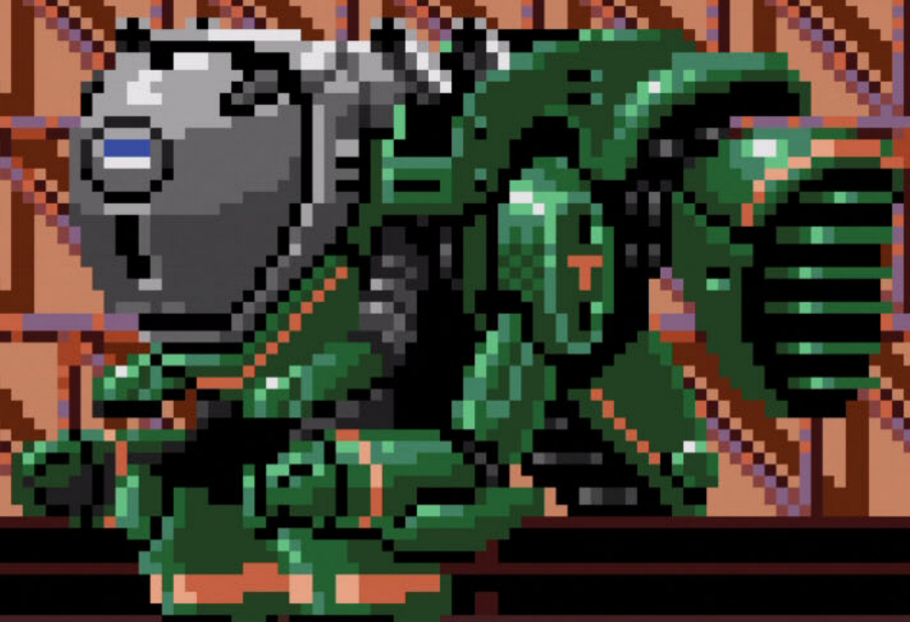
The third stage introduces your new ESWAT suit, but also brings a new world of pain. While it's powerful, the suit's biggest strength – its ability to fly – is also its biggest hindrance. Frustrating deaths due to seemingly wonky controls quickly give way to the sheer joy of learning just how much flexibility the ability to fly offers you once you finally master it.



Sticky Moments

ESWAT's fourth stage has you making your way through a laboratory that's filled with a number of gruesome experiments. You'll spend the majority of time destroying enemies as they break out of test tubes, but every now and then you'll have to negotiate cramped passageways, while getting chased by ominous black ooze.





BREAK CAPSULE

KONERD

DIVIDE CAPSULE

PYRADOK

SILVER BRICK

The time and era of this story is the Eighties. After the mothership Atari deployed Breakout, Taito gambled and cloned it, and the voyage of Arkanoid in the gaming galaxy started...



TRI-SPHERE

SLOW CAPSULE

PLAYER CAPSULE

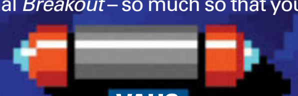

ARKANOID

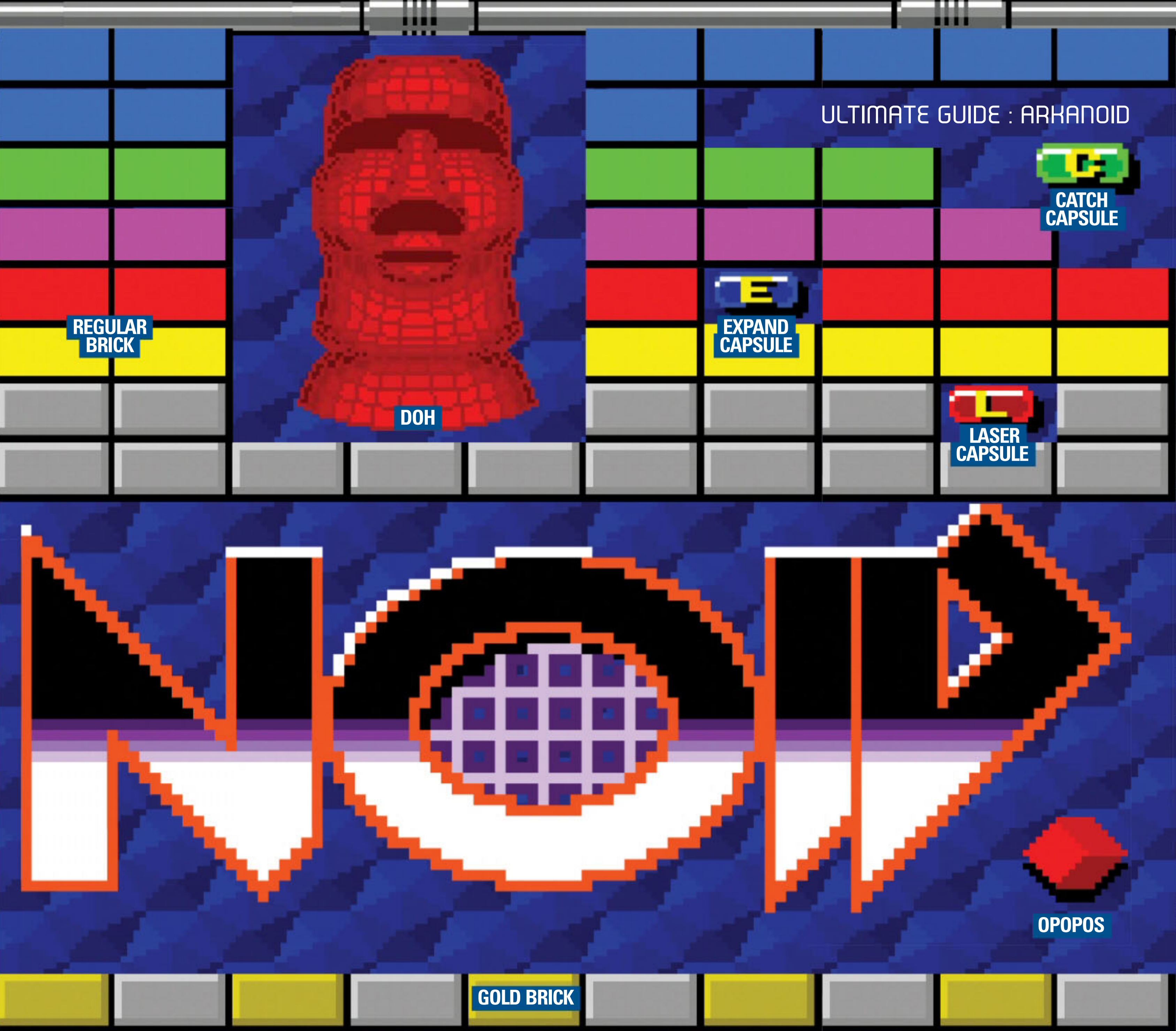
ENERGY BALL

Taito was one of the biggest coin-op developers of the Eighties, dispatching hit after hit just like those persistent *Space Invaders* which the firm is famous for. Its popular franchises targeted the home market, too, and few developers could match Taito's impressive hit rate. While the company marched on, aiming for arcade dominance, the titles that propelled it forward often relied on older, established ideas. *Operation Wolf* was basically a duck shoot brought up to date with a prisoner of war rescue plot. Similarly, *Chase HQ* was a checkpoint racer with a cops and crooks twist. And then there was *Arkanoid*.

Released in 1986, *Arkanoid* was a copy of Atari's seminal *Breakout* – so much so that you might assume *Breakout* had to be a Taito game, given the amount of gall on display. Taito presumably believed that the basic bat 'n' ball concept was fair game, seeing as *Breakout* was ten years old. The result was perhaps the first bona fide retro remake, as *Arkanoid* built on the *Breakout* formula in a number of notable ways.

First up the game offered a story of sorts, involving a moody space alien named Doh who destroys the Arkanoid spacecraft and traps the escape vessel Vaus in a hellish dimension filled with coloured bricks (think Legoland Windsor on a Bank Holiday). This plot was rather silly but it provided the player with a purpose: this wasn't just about clearing screen after screen of blocks, this was

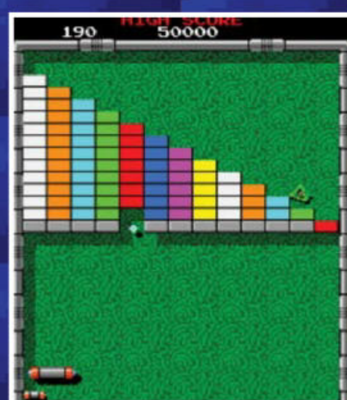

VAUS



about breaching the increasingly resilient defences and finally defeating Doh. And on Round 33 ol' big head himself would appear, spitting bricks, and the anticipated endgame would play out. The final round really was do or die as continues weren't allowed, even if you had credits in the bank.

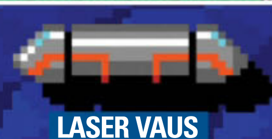
In addition to the story, the game featured several gameplay enhancements. Metal blocks were introduced – silver blocks required two hits to destroy instead of the usual one, while gold blocks were indestructible and often used to construct 'channels' which you had to direct the ball into. Also complicating matters were Doh's minions who'd emerge at the top of the screen and gradually descend as passages opened up. These irritants posed no direct threat to the Vaus except once hit they could ricochet the ball out of play.

Evening the odds were the power-up capsules that would drop from random blocks. There were seven in total, all marked with a corresponding letter, and they would generally make the game easier by reinforcing the Vaus (making it larger or turning it into a block-blazing laser gun, for example) or altering the ball itself (slowing it down or splitting it into three for chaotic juggling fun). The least common was the P capsule which awarded you with an extra life, yet the most coveted was the handy B capsule which broke a hole through to the next round. On some of the trickier rounds you'd be begging for a coveted B capsule to drop. ▶



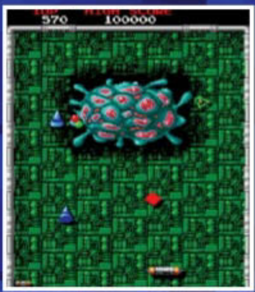
» [Arcade] The ball speeds up more quickly when it hits the top of the screen, so it's actually wiser to attack the bricks on the left than open the channel on the right.







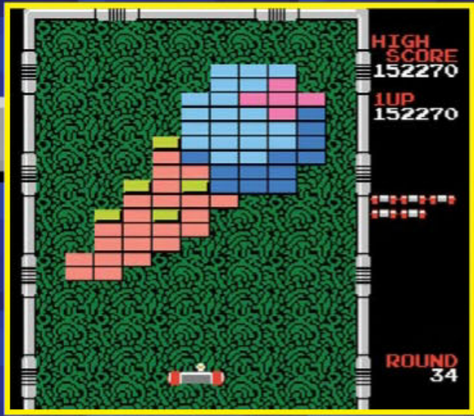
» [Arcade] To defeat Doh you have to teabag him multiple times.



» [Arcade] *Revenge Of Doh* introduces a mini-boss that would look more at home in Taito's *Darius* series.

Arkanoid was released as a standard upright cab with a sit-down cocktail variant arriving later. As you might imagine the hardware was fairly modest, consisting of a Z80 CPU running at 6 MHz and an AY sound chip. This meant that home versions were fully feasible and in total the game was released for 16 different systems. In Europe, Ocean picked up the licence and published the game on its Imagine label while Taito itself took responsibility in other regions. The home versions generally managed to capture the look of the game but there was one crucial element missing – the coin-op's rotary controller. The 'spinner' provided precision control – the faster you spun the quicker Vaus would move, allowing you to react to any unexpected deflections. Using a keyboard or joystick was okay but digital input couldn't match the accuracy of analogue. Happily, many versions offered mouse support which worked really well, while the Commodore 64, Atari 8-bit and NES releases could be controlled using paddles (the NES version actually came bundled with a custom 'Vaus' controller that featured a small spinner).

Taito America famously liked to tinker around and for its home versions of *Arkanoid* it looked to flesh out the backstory. Here we find out, by means of a cartoon strip, that the Arkanoid is carrying Earth's last remaining survivors when it is attacked by Doh. So it's not just a human angle – the whole human race is at stake! What a cosmic commotion.



» [NES] Ice cream! Ice cream! One of the three bonus rounds from the NES version of *Arkanoid*.

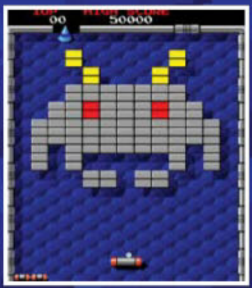
There was no such drama in the next game in the series. *Tournament Arkanoid* was essentially an updated version of the original coin-op, featuring nothing more than a new set of more difficult rounds. Created for the US market and distributed by Romstar in 1987, *Tournament Arkanoid* was designed to give the game's earnings a boost ahead of the true follow-up, which duly arrived later the same year. Subtitled *Revenge Of Doh*, the sequel upped the number of different screens to 64, although you'd need to play through the game twice to see them all as they were two separate paths through to the end. All of the power-ups returned and were joined by new ones, including a 'megaball' which would blast through blocks without stopping. The difficulty level was pitched somewhere between the original and *Tournament Arkanoid*, and it was a worthy sequel with enough new features and extra polish to draw players back.

Revenge Of Doh was ported to a number of home systems, though not as many as the first

"The final round really was do or die as continues weren't allowed"

BRICKING IT

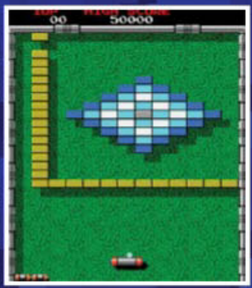
The five hardest stages and how to beat them



ROUND 05

WHY IT'S HARD: Oh look, a Space Invader! That's cute, except it's made out of annoying silver blocks so it will hang around a lot longer than it ever did in the old arcade game.

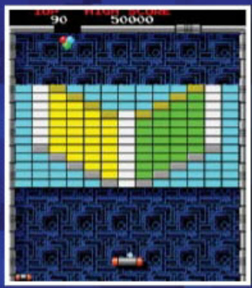
HOW TO BEAT IT: Just keep plugging away, hoping that one of those bricks rewards you with a laser capsule to speed things up.



ROUND 10

WHY IT'S HARD: You need to shoot the ball into the exhaust port on the left but it keeps impacting on the surface. That's particularly tricky because the ball always launches to the right.

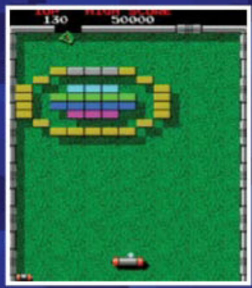
HOW TO BEAT IT: There's no real trick, but rest assured that once inside, the ball will do the rest, especially if you get a divide.



ROUND 15

WHY IT'S HARD: Featuring a total of 156 bricks, including eight gold ones, this is the densest level in the whole game. The gold bricks merely add an extra level of irritation.

HOW TO BEAT IT: Start at the bottom and work up! A laser is handy but a break capsule is even better so you can skip forward.



ROUND 26

WHY IT'S HARD: This round is deceptively difficult as it's hard to target those silver bricks. Plus the exposed ceiling means that the ball hits top speed pretty much straight way.

HOW TO BEAT IT: Position your bat carefully so you can deftly trick shot the ball off the right-hand wall and the ceiling.



ROUND 33

WHY IT'S HARD: It's the final battle, of course. You have to hit Doh 16 times in succession without getting hit by his projectiles. Continues are forbidden so you can't mess up.

HOW TO BEAT IT: He fires at you so keep moving. Go for wide-angled shots that will bounce off the walls, scoring multiple hits.



» [SNES] Released at the same time as *Arkanoid Returns, Doh It Again* on the SNES was easily the better game.

game. This was undoubtedly due to the many similar titles on the market, including Elite's *Batty, Gremlin's Krakout*, Nintendo's *Alleyway* and (quite brilliantly) *Arthur Noid* from Mr Chip. There was competition in the arcades too from the likes of Sega's *Gigas* and Namco's *Quester*. Taito could hardly complain, seeing as all of the games shared *Breakout* as a source. Indeed, Atari would go on to resurrect its old stalwart for the Jaguar in 1996.

Arkanoid did not retire from play, however, and in 1997 two separate sequels arrived: *Arkanoid Returns* in the arcades (and later for the PlayStation) and *Arkanoid: Doh It Again* on the SNES. Both games featured loads of rounds, additional power-ups and simultaneous two-player action. A decade later a portable version was released for the Nintendo DS, and in 2009 the game arrived on Wii, Xbox 360 and iOS. New versions of *Arkanoid* are sure to follow in the future, but for reasons not entirely clear Taito opted to omit the coin-op titles from its *Taito Memories* and *Taito Legends* retro collections. So if you want to legitimately revisit *Arkanoid* your best bet is one of the many excellent home versions. Or you could always grab a bat and a ball and a big pile of empty cereal boxes. ★



» [Nintendo DS] Bub cameos in the disappointing DS version. It's just not *Arkanoid* as we know it.

PETER JOHNSON

The coder, artist and musician worked on several Arkanoid conversions for Ocean



You developed *Arkanoid* for both the BBC Micro and Atari ST. How did the systems compare?
I converted it for the Atari ST first, then I went back and rewrote it all for the BBC Micro. I was excited to try a new platform which is one reason I chose to do the ST version first. I also felt that approach would give a better result, rather than aiming low and improving it for the ST. Both versions were written directly in assembly language. I had been writing BBC Micro games for four years or so by then, but it was surprisingly weird to return to 6502 assembler after writing in 68000 on the ST for a few months. For the BBC version I wrote custom sprite routines just for the ball and shadow that optimised shifting their graphics around really quickly, rather than using a general-purpose spite routine. There was actually no code or graphics in common between the BBC Micro and Atari ST versions.

What did you think of the original Taito arcade game, and did you have access to it during the development?
I enjoyed playing it and thought it looked great. I only tried to take on games that I both liked and felt I could do justice to. Ocean provided a special suitcase containing a JAMMA interface and arcade board. I also had a VHS video of someone at Ocean playing it through to the end, which was great for replicating level layouts. I redrew all the graphics and animation frames myself for both platforms.

You later converted *Arkanoid: Revenge Of Doh* to the ST. Was a BBC version of the sequel ever under consideration?
No, I think time had moved on by that point and the BBC was being a little bit overshadowed. I did do an Amiga conversion of *Arkanoid II*, though, which I had to persuade Ocean to do as it was still very early days for the Amiga in the UK.

Do you have fond memories of working on the *Arkanoid* games, or did you prefer working on original product?
Absolutely. I enjoyed both types of work. Squeezing a game into lesser hardware threw up lots of interesting challenges, and the fun – and occasional frustration – in the job was all about problem solving.

You were a bit of an auteur, doing the coding, graphics and sound. Was that down to personal preference or circumstance?
I guess it's because I could. There are benefits in being able to make all the elements of a game work together that a team of individuals might not have, but on the other hand I just considered myself 'okay' at most things as opposed to fantastic at any one of them.

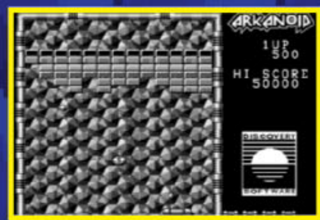


CONVERSION CAPERS

Which of the many home versions were true blockbusters?

APPLE MAC

■ It's *Arkanoid* for the original monochrome Mac. Despite the lack of colour it plays okay and includes some interesting features such as a difficulty level select. Uniquely, capsules continue to fall when the ball divides so it's possible to catch three balls on your bat!





COMMODORE 64

■ This conversion kicks off in style thanks to Martin Galway's outrageous opening tune and its dirty drum samples. Less memorable is the slightly iffy collision detection, as the ball often passes through the edges of the bat. As an added bonus, the game supports mouse and paddle controllers.



THOMSON

■ Ocean published this for the Thomson MO/TO range of computers, which were popular in France. It's easily the worst version available, featuring choppy gameplay and weird graphical choices. Worst of all – the ball rebounds off falling capsules which is wrong, wrong, wrong.



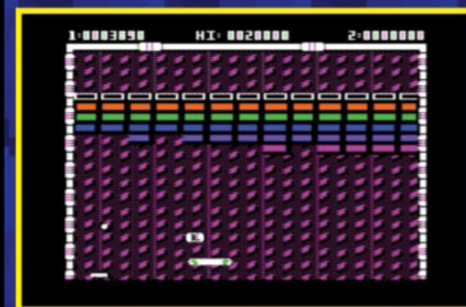
BBC MICRO

■ The Beeb was well at home when it came to colourful arcade conversions and *Arkanoid* doesn't disappoint. The graphics and sound are great but the game is spoiled by the speed of the ball – it goes bonkers after a few hits and the slow down capsule barely affects it.



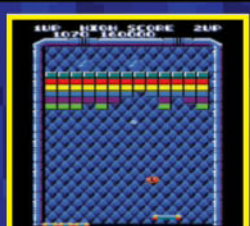
ZX SPECTRUM

■ A solid conversion that plays well. Graphics are a bit sparse, but that's a good thing when you compare it to the eye-watering *Revenge Of Doh* on the Spectrum. While there's no AY sound, the beeper manages to do a decent job of replicating the original's sound.



APPLE II

■ The aging Apple machine had *Breakout* running through its circuitry so a version of *Arkanoid* was a given. It's not bad either, being far from the worst version. The colours are obviously askew, but movement is smooth and the gameplay is authentic, particularly if using a mouse to play.

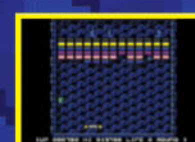


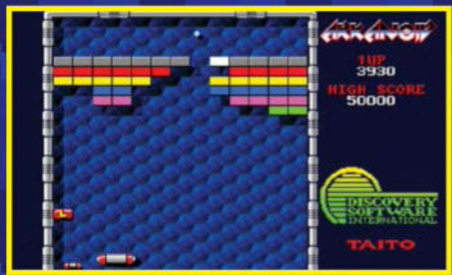
AMSTRAD CPC

■ The presentation for the CPC *Arkanoid* is very good, with the intro text scrolling across a star field. It mimics the coin-op too by having the score panel at the top of the screen rather than off to the side. It is a good version overall – although the enemies appear to have been knocking back the energy drinks prior to play.

ATARI 8-BIT

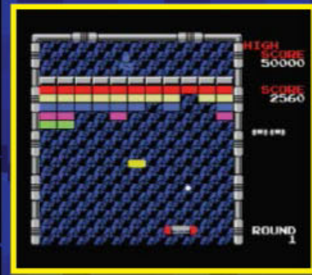
■ *Super Breakout* was an A8 staple so *Arkanoid* needed to deliver – and it did. The colours are a bit muted but generally the conversion cannot be faulted. And, of coursen it supports Atari's tennis paddles.





AMIGA

■ Rather than an ST port, this was developed for the machine and was one of the first Amiga games to really do justice to a coin-op. It's authentic in all areas and includes some extra options, like letting you select the ball speed and starting round. It's the best home version available.



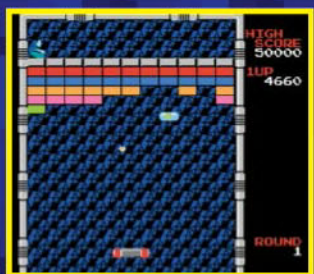
MSX

■ Similar to the NES version, although lacking the bonus rounds and the custom controller (one was released with the MSX-2 version of *Revenge Of Doh*, however). Graphics, sound and gameplay are aren't a million miles away from the coin-op so it's really hard to pick fault.

APPLE IIGS

■ Easily the best version for an Apple machine, and a strong rival for the Amiga and ST releases. It definitely looks like the coin-op and is only really spoilt by the ball speed – it doesn't just speed up quickly, it starts quickly! As such, it's difficult to advance through many rounds.



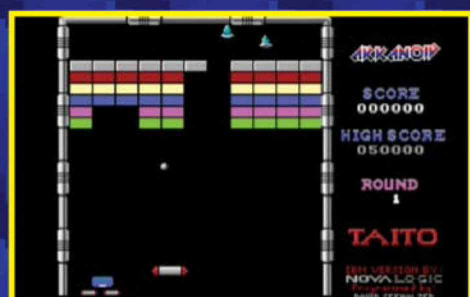


NES

■ The only console port of *Arkanoid* is probably the best 8-bit version available. Not only is the game perfect but it includes extra rounds before the boss encounter and a feature (or perhaps bug) were power-ups work in parallel. The dedicated Vaus controller seals the deal.

PC-DOS

■ PC *Arkanoid* looks terrible – and that's the EGA version! Seriously, though, the game features black backgrounds throughout and you could be forgiven for thinking you're playing some freeware *Arkanoid* knockoff. Crucially, the game plays really well and, hey, that's what counts.



NEC PC-88

■ The Japanese range received a version of *Arkanoid* and it's a quality conversion. The graphics suffer from a dithering effect, which, admittedly, is more pronounced under emulation. A version was also released for the PC-98 range.





TANDY COCO

■ This cartridge release for the Color Computer actually contains two versions of the game. Plug it into a CoCo 1 or 2 and you'll play a basic four-colour version (pictured). However, when loaded in the more capable CoCo 3 you get an enhanced version that's much closer to the coin-op.

ATARI ST

■ By the same author as the BBC Micro release and it shares that version's chief annoyance – the ball speeds up too quick! At least on the ST you have the luxury of mouse control, which makes the difficulty less of an issue. Visually it's almost arcade-perfect.



BRUCE LEE

Coder Ron Fortier had developed an engine for his next game but it lacked a lead character. Rory Milne discovers how Bruce Lee became Ron and artist Kelly Day's 8-bit hero



Having decided how he wanted to follow-up his Atari 8-bit *Zaxxon* conversion, Datasoft coder Ron Fortier developed a gameplay engine prior to receiving his next assignment – another licence, which Ron immediately saw potential in. "I created the engine for a game not knowing what licence, if any, it would be used for. The player could run and interact with the background, but it didn't have a specific character or theme in it. It was sort of a sandbox for me to test if the 'puzzle and play' thing that I envisioned in my head would work from a technical standpoint. It was later that the core essence of what I was creating became the game known as *Bruce Lee*. We knew it would be big. There were great licences that you could dig your teeth into, and none were better than *Bruce Lee*. It obviously had name recognition, but it also set an expectation for the gameplay."

Ron had laid the groundwork for that gameplay while researching the Atari 8-bit's workings, and would develop *Bruce Lee* for Atari's system using an Apple II for development. "The genesis of the gameplay was from research that I was doing related to aspects of the ANTIC/CTIA/GTIA processors. I was intrigued by how the processors produced collision detection [using] colours. *Bruce Lee* had to fit in 32k. The processor ran at 0.8 MHz so you were always cycle counting. Hardware collisions would help reduce code, and, as it was done in hardware, it would be a zero hit from a cycle perspective. We had our Apple II system up and running by the time I programmed *Bruce Lee* – 6502 was 6502 regardless of what it was assembled on. As there wasn't any operating system required by the code, there was no issue with the Apple II beaming the code into a slave Atari."

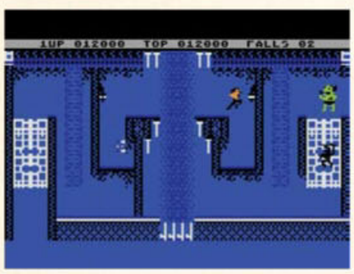


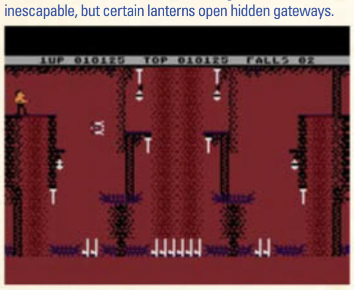
» [Atari 8-bit] Seconds into his mission, Bruce Lee faces the Ninja and the sumo warrior, Green Yamo.

"There were great licences that you could dig your teeth into, and none were better than Bruce Lee"
Ron Fortier

Bruce Lee's movies and the wider martial arts genre inspired the basic mechanics for Ron's project, while memory constraints dictated the scope he and artist Kelly Day had for animation. "I was familiar [with] and a big fan of the genre at the time. The three core game mechanics were fairly obvious: platform exploration, timing and fighting. I [also] wanted graphic and sound queues that led the user to explore and interact. Core gameplay mechanics drove the design. Space was the other limiter, so Kelly and I worked on animations [that] would exactly fit in the allotted storage for animation. Once we had those basic poses, I was able, through code, to animate them. Subtle sixtieth of a second timing in movement and pose yielded the 'feel' of the character."

Unlike Ron's previous game, Kelly Day designed the graphics fuelling his current project's animated characters – including a monochromatic Ninja. ▶


» [Atari 8-bit] Some of *Bruce Lee*'s stages look inescapable, but certain lanterns open hidden gateways.


» [Atari 8-bit] This stage may be free of enemy warriors, but crossing it requires pixel-perfect platforming.



IN THE KNOW

» **PUBLISHER:** Datasoft
» **DEVELOPER:** Ron Fortier and Kelly Day
» **RELEASED:** 1983
» **PLATFORM:** Atari 8-bit
» **PLATFORM:** Platformer/Beat-'em-up



BRUCE LEE 101

■ Striking a considered balance between platformer and beat-'em-up throughout its 20 challenging stages, *Bruce Lee* stands apart thanks to its flexible objectives. Although certain lanterns unlock gateways and certain situations demand fight or flight, the specifics of Bruce's quest to defeat an evil wizard are largely left up to the player.

BRUCE LEE VS VIDEOGAMES

More videogames starring the Dragon



BRUCE LEE LIVES

SYSTEM: PC **YEAR:** 1989

■ Don't expect a smooth difficulty curve from *Bruce Lee Lives*; the game drops you in at the deep end and only gets harder. Moves require perfect positioning and ruthless AI opponents quickly learn how to defend against overused attacks. Bruce's foes aren't invincible, though, and can be overcome with practice.



DRAGON: THE BRUCE LEE STORY

SYSTEM: Various **YEAR:** 1993

■ The movie, *Dragon*, inspired two distinct games: a fighter for the Mega Drive, SNES and Jaguar, and a platformer for the Master System and Game Gear. Both takes are solid, with the fighter adapting the flick's best fight scenes and the platformer re-imagining key moments in Bruce's life.



BRUCE LEE: QUEST OF THE DRAGON

SYSTEM: Xbox **YEAR:** 2002

■ Intended to be the first in a new series of *Bruce Lee* games, the dire reception of this brawler soon squashed that idea. Poor visuals and irritating battle cries may have been forgiven if an awkward targeting system hadn't crippled the game's engine.



BRUCE LEE: RETURN OF THE LEGEND

SYSTEM: Game Boy Advance **YEAR:** 2003

■ Essentially a playable *Bruce Lee* movie, *Return Of The Legend* sees a virtual Bruce star as Hai Feng – a man on a mission to avenge his master. The soundtrack, outfits and iconic moves enhance this beat-'em-up's fan service.

CONVERSION CAPERS

How Bruce's adventure fared on other systems of the time



COMMODORE 64

■ A faithful port, as you would expect given that it was developed by the original game's coder/artist team, C64 *Bruce Lee* is faster than Atari *Bruce Lee* and it boasts better audio.



APPLE II

■ Kelly Day did a great job of reworking his Atari visuals for the Apple II's restrictive colour palette. In other respects, the port accurately replicates mechanics and gameplay.



PC

■ Look past the PC *Bruce Lee*'s garish colour and you'll find that the game plays extremely well. The controls feel tight, the collision detection is spot on and the animation runs smoothly.



PCJR

■ Nearly identical to the PC version, IBM's system offers superior visuals thanks to a 16-colour graphics mode. Weirdly, Green Yamo is blue, but this is still the better PC port.



ZX SPECTRUM

■ Spectrum *Bruce Lee*'s rapid flying kicks are an unexplained alteration. Mechanics aside, though, this adaptation to the little black box is a solid one and worth checking out.

"We had just started to use graphic editors at Datasoft around the time we started *Bruce Lee*. Prior to that point programmers did graphics by hand. But everyone knew that programmers were horrible artists so there was the sea change of bringing in focused artists to work the tools. Kelly was a master artist that understood the limitations of the systems and how to exploit them for visuals. The Atari had 'player missile' graphics. The 'players' could consist of multiple colours – the 'missiles' a single colour. If the programmer positioned the 'missiles' next to each other and, if you had a great artist, they could become a single colour character – [like] the Ninja. Kelly's artwork was incredible considering the limitations. He had to deal with a small resolution and had to construct his graphics from a fixed set of characters. Kelly had to visualise how to reuse those characters to create amazing backgrounds from them."

While Kelly created backgrounds Ron coded a system to incorporate the pair's characters and each level's interactive scenery. "We developed a ruleset from which to create levels: Bruce can climb on this, can't go through this, a waterfall animates, and so on. With the basic mechanics in place, Kelly was then able to make a static level. There were sketches of basic layout and placements

"I wanted some screens to be easy and give you time to catch your bearings. On others I wanted immediate attack" Ron Fortier



» [Atari 8-bit] A fast travelling underground current puts Bruce Lee's famed agility to the test.

» [Atari 8-bit] Falling from these battlements would bring a grisly death for Bruce on the spikes below.



for the game. From those, Kelly created the graphics for the backgrounds, which were given to me as blocks of memory that I had to then make come alive. I wrote an animation system to handle the 'player' and background animations. A jump, punch, kick and leap all had specific sequences of frames that were displayed. Each moved Bruce or the characters in specific ways. The background animation system made the static screens come to life. All of the triggers, puzzles, and so on had to be designed. The backgrounds had fixed timing so that players could plan their leap, and fight to the next safe spot. The design was to have an obstacle within a screen and many hurdles [to overcome] for completion of the level."

The evolution of Ron and Kelly's levels required each developer's skills and benefited from the opinions of the wider Datasoft staff pool. "When I needed artwork to achieve a puzzle, I would ask Kelly for graphics that overwrote an existing part of the background. Spikes, electrical charges, candles, belt speeds and the non-player characters chase states were all added and tuned for gameplay. Level design was always an outgrowth of what was working. When I programmed something we liked we'd say, 'wouldn't it be great if we had x or y?' Datasoft's entire internal development team were within 50 feet of each other. This enabled playing of each other's games. As the levels of *Bruce Lee* came together, you could tell what people would like so those features became more prominent on later levels."

Besides playtesting, Ron's motivation for tweaking levels came from a desire to manage Bruce's entrances and the interaction of his foes with each stage. "As I would implement a background, I would determine the Ninja and Green Yamo's placement. I always wanted the non-player characters to be an element of the game, so it was important to have levels that they could traverse and interact with Bruce on. The basic looks rarely changed, but placement of gameplay elements did. Where Bruce would enter the next screen had to make sense. I wanted some screens to be easy and give you time to catch your bearings. On others I wanted immediate attack. I wanted you to have to react and use your basic knowledge of how to get through the immediate challenge."

Ron also devised animated set pieces such as waterfalls and sequences of fast moving electrical charges. "*Bruce Lee* was heavily dependent on character graphic animations. The idea for character animation is that you update the character and everywhere on the screen that character is displayed the updated animation is visual. I could move eight bytes and an entire portion of the screen would appear to be moving. This reduced the need to move large sections





AMSTRAD CPC

■ Similar to the C64 port, but with brighter colours and more basic sound, Amstrad *Bruce Lee* emulates the original well. The one change is that foes take more hits to dispatch.



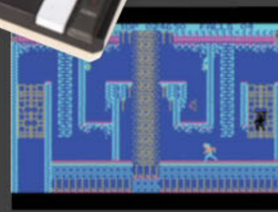
BBC MICRO

■ The bizzarely purple and blond BBC version our hero doesn't look the part, but more disappointingly, BBC *Bruce Lee* lacks the Ninja and a number of stage elements.



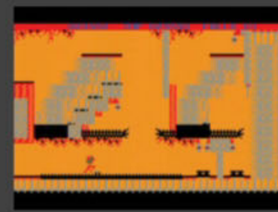
MSX

■ Playing at a comparable speed to the original, MSX *Bruce Lee* feels a lot like its inspiration. MSX *Bruce*'s foes take more hits, though, and Yamo attacks when you're climbing.



PC-88

■ Although Bruce, the Ninja and a blue Yamo contrast with its vivid ground levels, the fighters and backgrounds merge in some of the PC-88 port's underground stages.



FM-7

■ At a glance, FM-7 *Bruce Lee* is identical to the PC-88 port, but for presumably technical reasons the FM-7 Bruce is more awkward to control and suffers from flickering.



» [Atari 8-bit] Sumo warrior Green Yamo lets loose a war cry as Bruce ascends towards him.



» [Atari 8-bit] The Ninja and an unpredictable geyser stand between Bruce and another lantern.



» [Atari 8-bit] Bruce sprints towards a final lantern while his wizardly foe rains down magic from above.



» Ron Fortier delivered an Atari 8-bit conversion of *Zaxxon* before he created *Bruce Lee*.

of memory so that the game's response could be quick. Animation combined with hardware collisions allowed me to write 'player' animation processing that allowed Bruce to interact with animated backgrounds in interesting ways."

Bruce's violent interactions with his foes was another area of development that Ron poured time into fine-tuning. "I created a state machine for each character – idle, attacking, punching and kicking. I programmed the game to change the character state based on the position of Bruce. As every character was independent, I was easily able to alter the trigger mechanisms."

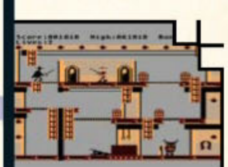
As a by-product of the way Ron had coded his villains, extra programming allowed for a unique two-player mode to be included. "A two-player game was impossible, but playing one of the non-player characters and foiling your friend was not. It was easy to hook up the non-player characters to the joysticks."

Just as important to Ron was that he gauge the difficulty of each stage of his game at just the right level. "Every designer wants a varying level of difficulty in their games. You don't want someone to run through it, and you don't want to frustrate someone. The key for *Bruce Lee* was to get it dialled in at the right rates [and] I, luckily, had a development system that allowed me to assemble my code and test in rapidly."

Ron's memories of *Bruce Lee*'s release are of amazement at his game's sales numbers in its original Atari 8-bit form and the conversions that followed. "I was blown away by [its] success. While it pales in comparison to today's dollars, I think we had a higher percentage of the installed base. It was one of those games that everyone had. The first conversion was to the C64, as I had increased RAM and 25 per cent more CPU speed I decided to write an Atari emulator. Apple, PC and PCjr were in-house, so I was able to work with the programmers. You really couldn't say much about the Spectrum as I just remember it blinking a lot. The MSX was fun, but working internationally was challenging at the time so our team couldn't help that much on quality."

Asked if he would make any changes to *Bruce Lee*, Ron offers a single regret, which doesn't dampen the pride he feels for his game. "Pat Garcia was president and he had problems playing the game, so he had me dial it back a bit. Given the choice I would have gone with the second to last settings as I felt they were perfect. [But] I built a game that I wanted to play. I was given the opportunity by Datasoft to craft the code and make it tight. That really paid off in the end. You know it is a great game when the team continues to play it after it ships." *

Many thanks to Ron Fortier for his fascinating memories.



DEVELOPER HIGHLIGHTS

CONAN: HALL OF VOLTA
SYSTEM: Atari 8-bit, C64
YEAR: 1984

THE GOONIES
SYSTEM: Various
YEAR: 1986

ZORRO (PICTURED)
SYSTEM: Atari 8-bit, C64
YEAR: 1985

Defenders Of Oasis

"I SHOULD HAVE FREED THE GENIE WHEN I HAD THE CHANCE…"

RETROREVIVAL

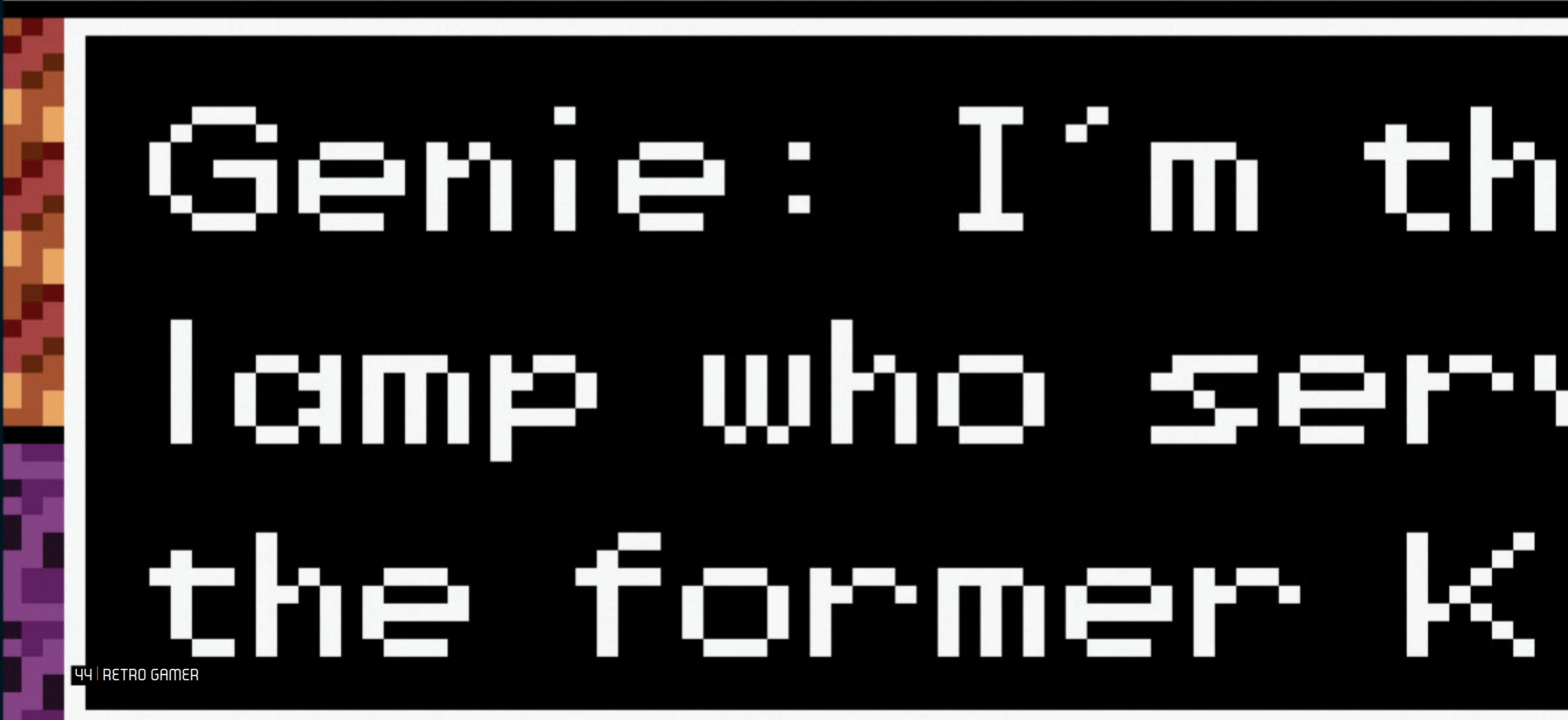


» GAME GEAR » SEGA » 1992

It's probably fair to say that the Game Gear isn't the first platform most people would think of when it comes to lengthy games. Not only does Sega's handheld share much of its library with the largely action-oriented Master System, but playing it for any major length of time requires you to either sacrifice portability to a mains adaptor or pony up the cash for frequent battery replacements. However, whenever I think of the system I often end up singing praises for *Defenders Of Oasis*.

The game ranks as one of my favourite games on the system for a variety of reasons, not least its setting. I'm always a fan of games which take the road less travelled, and *Defenders Of Oasis* does so by eschewing the common European fantasy setting in favour of a Middle Eastern influence, drawing from the likes of *One Thousand And One Nights*. The story is well paced for the handheld format and it's far less frustrating than many 8-bit Japanese RPGs, as the game doesn't require a great deal of repetitive battling in order to level up. What's more, it's an exclusive title, which makes it stand out even more to a big Master System fan like me.

Defenders Of Oasis is something of a forgotten gem – not only is it a great Game Gear game, but one in an unusual genre for the system. If you're looking for a game that'll make all those batteries seem worth the money, you could do a lot worse… *




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Minority Report

CLASSIC GAMES YOU'VE NEVER PLAYED



ZX SPECTRUM 128

The vast majority of Spectrum games were designed to run on the standard 48K machine, but there were a select few that were 128K-only and proud. Martyn Carroll rounds up the best

WHERE TIME STOOD STILL

■ DEVELOPER: DENTON DESIGNS ■ YEAR: 1988

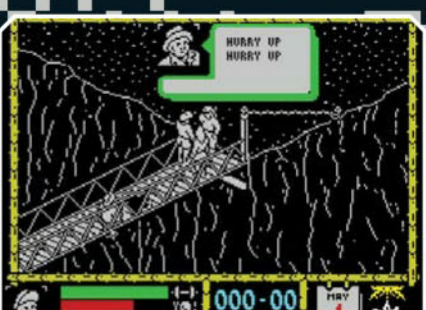
■ Ocean Software was at the forefront of Spectrum 128K gaming, producing the first titles to take advantage of the new machine's capabilities. Yet in the rush to get product out, it chose the easy route of taking existing 48K titles and jazzing them up with AY sound and a sprinkling of new content. Other publishers followed suit and there was a dearth of dedicated 128K software. Then, in 1987, Ocean redeemed itself by giving Denton Designs – creators of the hits *Frankie Goes to Hollywood* and *The Great Escape* – the green light to go off and produce a 128K blockbuster. The result was *Where Time Stood Still* and it was totally worth the wait.

WTSS was closely related to *The Great Escape*, with its game world featuring AI characters, day and night cycles, and depicted in scrolling isometric 3D. It too had its origins in a mainstay of Saturday afternoon TV, this time the Seventies movie *The Land That Time Forgot*. So suspicious prison guards were out, replaced by angry natives and hungry beasts. But the real difference was in the scale of the game. The extra memory was used to create a vast landscape filled with danger and excitement from which you and your companions had to escape. It was both cruelly unpredictable (prehistoric creatures would ramp up and maul you) and carefully structured, in that several set pieces were presented including a broken bridge rescue, a perilous swamp crossing and a chilling sacrifice scenario! It really was a cracking *Boys Own* adventure.

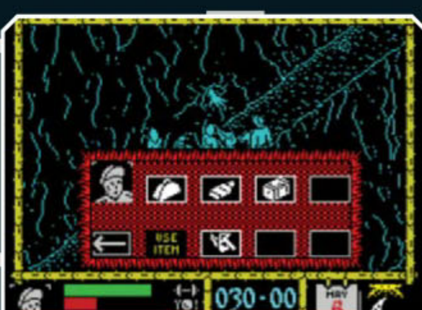
WTSS is perhaps a controversial game to highlight simply because it is such an obvious choice. But then it deserves huge credit for being the first 'Megagame' to be designed specifically for the Spectrum 128. It would not run on a standard Spectrum without significant revision – yet that's just what Denton was asked to do. "I did do a 48k version," says John Heap, the game's programmer. "I remember it being hard work and a bit of a downer after having crunched for so long on the original. The game loaded in two parts, either side of the river."

Not only would the adventure have to be halted as more of the map was

"The extra memory was used to create a vast landscape filled with danger and excitement"



» [ZX Spectrum] Your first dilemma. Do you rescue Clive from the broken bridge or is he too much of a burden?



» [ZX Spectrum] The giant hand in the hole will push you off the cliff path – unless you give it something as a distraction.

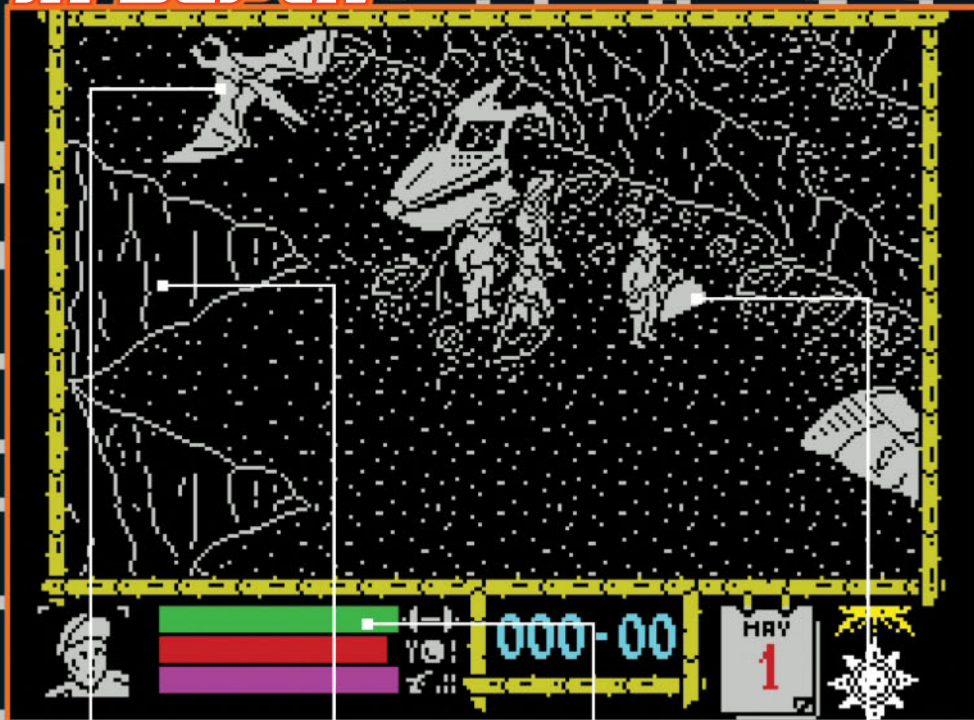


» [ZX Spectrum] Oh no! The natives are not impressed with your pillaging and are threatening to toss Gloria into the gorge!

loaded in, but the visual performance would be affected too as the game made use of the 128's shadow screen as a double buffer. "The 128K version did use the shadow screen for smoother scrolling," says John. "I recall it scrolled with a resolution of four pixels horizontally and two pixels vertically. The 48K couldn't do this so had a resolution of eight by four. I doubled the walking speed to compensate." Ultimately the 48K version was never released – and the same fate befell the Amstrad release. "I did a CPC version," he reveals. "I saw Ocean some months later and asked about the release and I was told there were too many bugs…"

With both the Spectrum 48K and CPC versions canned, and a Commodore 64 version never even attempted (probably wise when you see the sluggish performance of *The Great Escape*), the Spectrum 128 original remains the only 8-bit version of this uncompromising – and uncompromised – classic.

IN DEPTH



TERROR FROM ABOVE!

■ You have to keep on your toes otherwise a deadly Pteranodon may swoop down and snatch one of your people. Once you're in its claws, there's nothing you can do to escape.

DEATH DOWN BELOW!

■ It's not just the dinos and cannibals you have to watch out for, the landscape is perilous with deadly ravines. One wrong step and you'll take a tumble to your doom.

HEALTH MATTERS

■ Escape will not be possible unless you feed and water your companions. You should also let them rest to conserve their strength. If you don't look after them they'll just wander off on their own.

LOST AND FOUND

■ You need to make the most of items that you discover, so start by searching the crash site for anything useful. The bag is particularly handy as it lets you carry extra items for your trek.

IF YOU LIKE THIS TRY…



ALIEN

SPECTRUM/C64/CPC

■ The characters in *WTSS* had their own individual personalities and that concept stretched back to this early movie tie-in which was John Heap's first published game. Your mission was to outlive the Nostromo's stowaway and that meant not just commanding the crew but looking out for them too.



THE GREAT ESCAPE

SPECTRUM/C64/CPC

■ The forerunner to *WTSS* surely ranks as one the great Spectrum originals. This wasn't just about escaping from a prison camp – it was about following the routine, standing in line (literally) and then grabbing opportunities to further aid your escape when they came along. It was genuinely thrilling.



WRECKERS

ST/AMIGA

■ The third of Denton's isometric adventures was set on board a space station under attack from alien slime. With three officers and programmable droids at your disposal you had to repel the threat. A Spectrum 128 version was developed (and even reviewed in *Crash*, scoring 93%), but never released.

Minority Report

NAVY SEALS

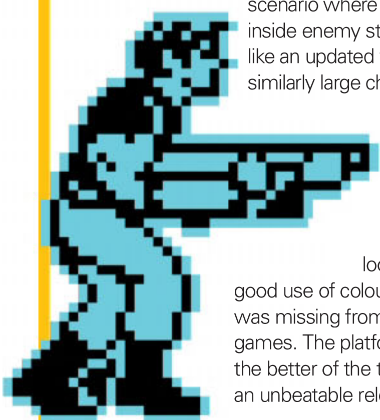
■ DEVELOPER: OCEAN ■ YEAR: 1991



» [ZX Spectrum] A brief but very neat animated scene plays when you reach the hostages.

■ **Ocean got it all wrong here. Instead of the usual practice of taking a great film and producing a dire tie-in (see *Terminator 2* or *Darkman*), it grabbed the rights to a cinematic bomb and fashioned it into a brilliant action game.** Or rather two games – a platform-based shooter and a separate scrolling shooter. The reason for such a generous package was due to a change of policy where Ocean opted to primarily support the 128K Spectrums from 1990 onwards, which was great new for those that had picked up the system. *Navy SEALS* was already in development as a scrolling shooter for 48K machines. When the decision was made, the game was spruced up with new graphics between levels and crucially it became the second act to a brand new main event.

The new game featured a thrilling infiltration scenario where you had to prime bombs inside enemy strongholds. It was a lot like an updated version of *Saboteur*, with similarly large character graphics, although the animation was far superior to Durell's game with your soldier running, jumping and vaulting athletically between platforms. It looked fantastic and featured good use of colour too, something that was missing from many late era Spectrum games. The platforming game was clearly the better of the two but as a whole it was an unbeatable release.





» [ZX Spectrum] The rocket launcher makes its mark inside the enemy barracks.



» [ZX Spectrum] The second scenario sees you shooting up enemy soldiers.

MORE GAMES TO PLAY



» LITTLE COMPUTER PEOPLE

■ DEVELOPER: ACTIVISION
■ YEAR: 1987

■ **The C64 life** sim relocated to the Spectrum 128 with nary a mishap. This groundbreaking title wouldn't have been feasible on a stock Spectrum – with just 48K available your abode would have been seriously downsized. Activision supported the bigger-memory Spectrum with a number of upgraded 48K releases, but this was its first dedicated 128 release and it didn't disappoint.



» GUILD OF THIEVES

■ DEVELOPER: MAGNETIC SCROLLS
■ YEAR: 1988

■ ***The Pawn* was** 128K only and the sequel went further being only available on +3 disk. Despite the new format the game was still text only, lacking the location graphics that shone on other versions. While that's a shame this was one of finest adventures available for the Spectrum. It was very verbose but also very funny, and with enough wild antics to ensure the return visit to Kerovnia was even better than the first.



» CARRIER COMMAND

■ DEVELOPER: REALTIME GAMES
■ YEAR: 1989

■ **Following the success** of the Spectrum version of *Starglider*, Realtime Games worked on this superb version of the 16-bit hit. With no scaled-down version to consider, it was able to accurately replicate this imposing sim on 128K machines. All of the gameplay features were included and the graphics were depicted using shaded polygons. The game took two years to develop.



» BATTLE COMMAND

■ DEVELOPER: REALTIME GAMES
■ YEAR: 1990

■ **Realtime's follow-up** to *Carrier Command* was another technical marvel. It wasn't a sequel, though – it was published by Ocean and was more action-based, having more in common with Atari's *Battlezone*. The graphics were great and immersed players in the futuristic conflict. It may have lacked the depth of the original but, with ten missions to tackle, it wasn't a game you'd finish in a hurry.

BLIZZARD PASS

■ DEVELOPER: ADVENTURESOFT / ALAN COX ■ YEAR: 1986



» [ZX Spectrum] One of the more random puzzles involved defeating a slime monster… with soap.

■ **This work of interactive fiction was never reviewed in any of the main magazines (possibly because it was developed by AdventureSoft in 1986 but published by Tynesoft sometime later).** It did, however, make regular appearances in the mags for several years, albeit in the context of baffled players contacting the adventure pages, seeking solutions to the game's many problems.

Blizzard Pass was tough and often obtuse (to pass a killer yeti you had to 'shout' to cause an avalanche that would bury it, obviously). Hand-holding and hint sheets were therefore compulsory, yet there was something beguiling about *Blizzard Pass* and its hair-tearing puzzles. It certainly helped that it was a very well presented adventure. Every location (and there were lots of them) had an illustration and many were interactive, showing if doors were open or closed, or if monsters were in the room with you. The text descriptions were pretty good too, and you can imagine that if this was a 48K game it would have required two or even three separate loads, resulting in a less expansive, more linear adventure. The game was also released for the Commodore 64 but tellingly that version was a text-only adventure affair.



» [ZX Spectrum] You can take a breather once you're out of the freezing blizzard.

RETRO STINKER

»CISCO HEAT

■ DEVELOPER: ICE SOFTWARE ■ YEAR: 1991

■ **This conversion of** the coin-op racer was a 10/10 title – that's 9/10 of the game being the loading screen and 1/10 for the actual game itself. It's even worse that ICE's earlier misfire, *Chase HQ II*.



» GAUNTLET III

■ DEVELOPER: SOFTWARE CREATIONS
■ YEAR: 1991

■ **This sequel to** *Gauntlet* is often derided by fans of the series due to its 3D approach and slower pace. No, it's not really *Gauntlet*, but it's still a great game in its own right. Those clever chaps at Software Creations really pushed the hardware and the isometric viewpoint scrolled smoothly and didn't creak too much even when two players and a host of nasties were on the screen. The game also had great music by the Follin brothers.



» SWIV

■ DEVELOPER: STORM SOFTWARE
■ YEAR: 1991

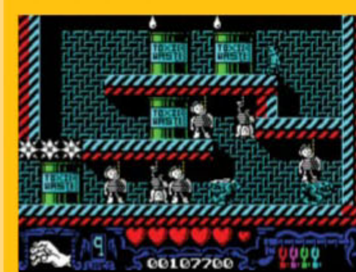
■ **The semi-sequel** to *Silkworm* was a revelation on 16-bit machines and this 8-bit attempt managed to hold its own, providing intense shooting action for one or two players (one controlling the chopper, the other the jeep). Despite being 128K-only, the game's four levels were split over two loads. This at least ensured a variety of enemy types and differing terrain. *Saint Dragon*, Storm's other shooter for the 128, also proved to be a blast.



» ROD LAND

■ DEVELOPER: STORM SOFTWARE
■ YEAR: 1991

■ **Jaleco's cute platformer** was a welcome addition to the 128, providing cutesy baddy-bashing fun for those that had tired of *Bubble Bobble*. The game was slightly spoilt by monochrome graphics, lacking a background colour other than black! Colour was often sacrificed due to scrolling but there was no excuse here. It's a good job it was hugely entertaining to play, particularly when you teamed up with a friend.



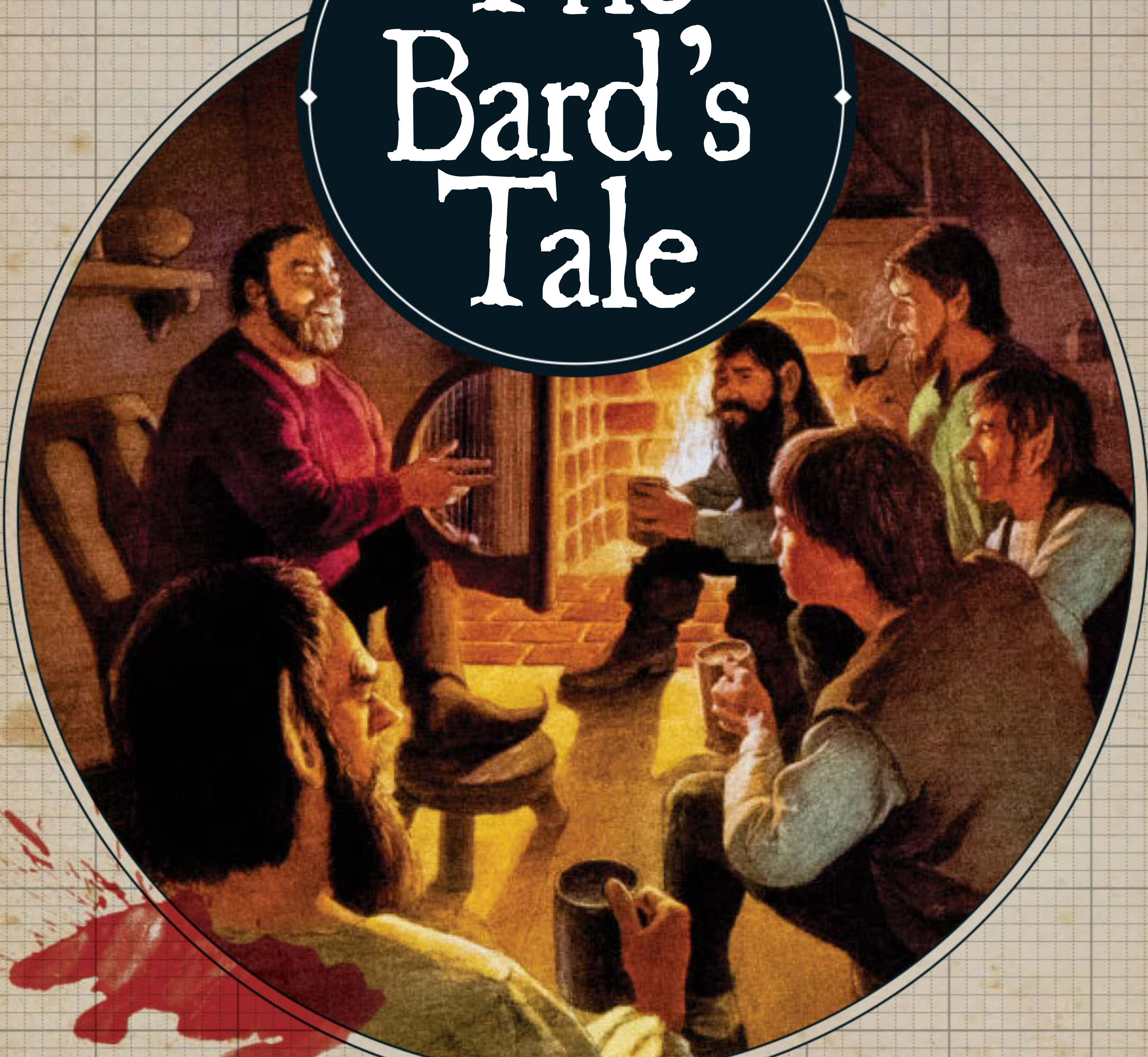
» THE ADDAMS FAMILY

■ DEVELOPER: OCEAN
■ YEAR: 1992

■ **In contrast to** *Rod Land*, this platform game based on *The Addams Family* movie went colour crazy. So not only did it play like a NES game but it looked like one, too. It was a lot of fun, with you taking control of Gomez and having to explore a huge map in search of your family. This was actually Ocean's final game for the Spectrum, arriving just after the very disappointing *Robocop 3*.

VOLUME I

The History of The Bard's Tale



As one of the most popular RPGs of its time, the story of The Bard's Tale's was at risk of being forever lost to history. Adam Barnes recounts how this beloved series came to be, and how it's making a comeback

Countless are the times the industry has witnessed the effect that a single game can have. Genres have been born, franchises have been made and, as with so many cases, companies have thrust themselves into the halls of fame. *The Bard's Tale* was one such title, a game that was born from the desire to simply improve on what had come before but ended up becoming a huge success for Interplay. Here was a company working on smaller games, a handful of work-for-hire programmers working on conversions, its own original creations not coming until months after its inception. After brokering a deal with Activision, however, its fortunes quickly picked up, and Interplay would set to work on three text adventures. This gave the company enough of a financial backing to also work on its own original games and while it would set to work on developing the likes of *Borrowed Time* and *Mindshadow* for Activision – games that would be built on the work done by Brian Fargo's own *Demon's Forge* years earlier – it would also set about creating its first RPG. This, it turns out, would become *The Bard's Tale.*

Interplay knew it had the skills to make something special, and having seen the likes of the popular RPG *Wizardry* it wanted to approach that same gameplay in a much improved fashion. Though *Wizardry* had made a name for itself among RPG fans, its earliest titles weren't all that much to look at; wireframe dungeons and reams of text and numbers meant it was a difficult game for anyone but the most persistent to enjoy. "Growing up I spent much of my time playing *D&D*," says Interplay founder Brian Fargo of *The Bard's Tale*'s inspiration, "some of my best memories were from the hours we would play. *Wizardry* was a major influence and set the bar for how deep and interesting you could simulate crawling around in dungeons, looting and fighting monsters." Brian adds that Interplay's main goal for the RPG was to "bring a graphical and musical upgrade to the genre." Enter Michael Cranford, a friend of Brian's who had created a demo of a character walking around a 3D town – in the same way we now recognise as navigating *The Bard's Tale*'s Skara Brae. Under the working name of *Spectre Snare*, Brian agreed to let Michael work on his *Wizardry*-style RPG as an independent contractor – under Michael's provison that the game would remain under his control.

"Mike Cranford did not want to be an employee," states Rebecca Heineman, one of the key early employees at Interplay, "he just wanted to be a contractor. He started working on it but Mike ran into some problems technically, so I came in and I helped. ▶



» [Atari ST] The Atari ST and the Apple IIGS versions of the games had the best art, and stood out among their contemporaries.



» [DOS] The third *Bard's Tale* game placed an emphasis on story, with plenty of dialogue and characters to meet.



» [DOS] The first two *Bard's Tale* games were notorious for their difficulty, especially the second one.



» [Apple II] *The Bard's Tale* was a difficult game, as much for the various monsters you'll battle as the confusion over the game's direction. Exploration was key.



THE BARD'S TALE 101

■ All three games, the fourth that would become *Dragon Wars*, and even the new Kickstarted game all offer the same core experience divided into two parts: exploration from first-person viewpoint and turn-based party combat. The dungeons followed a similar pattern, though would sometimes involve puzzles to solve or difficult environments to overcome.

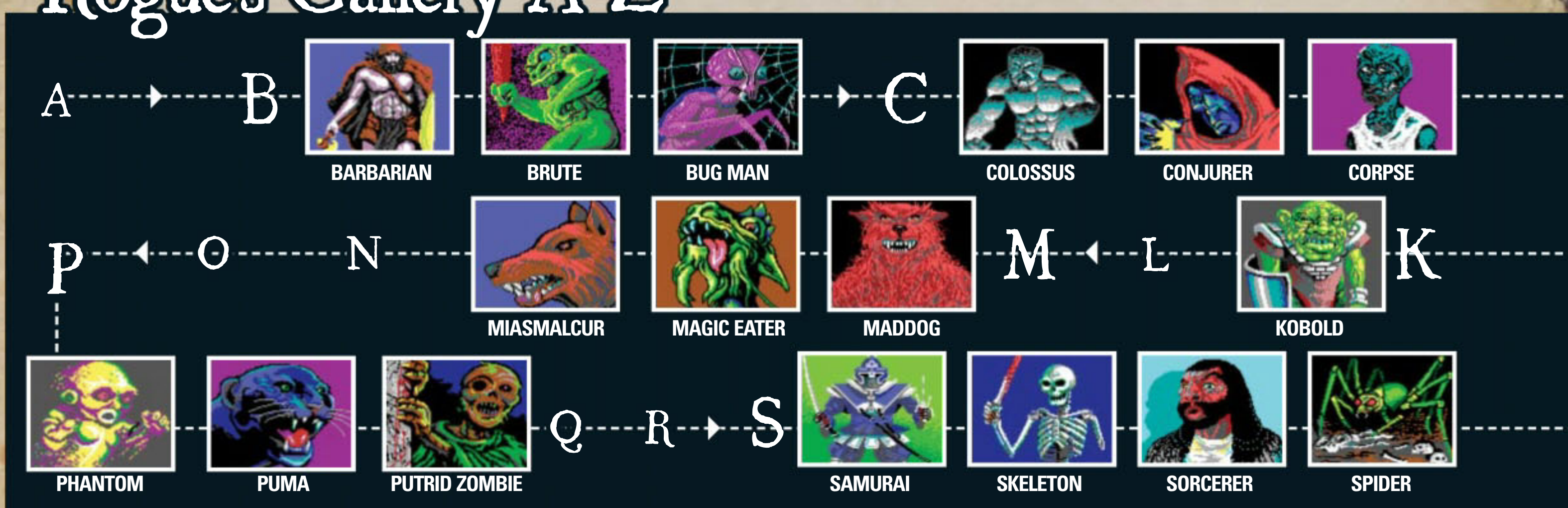


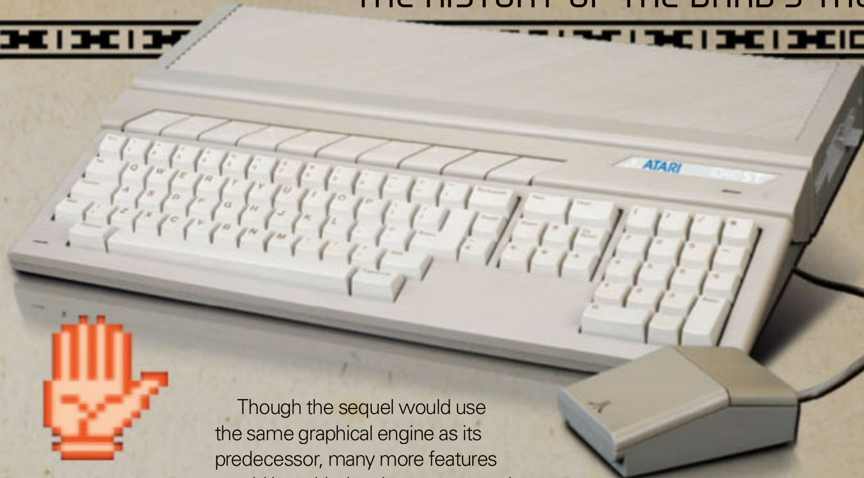
» Brian Fargo is an RPG veteran and avid fan of the genre.

At the time I was writing *Borrowed Time*, I believe; then I was the one at Interplay that was writing all the games. I wrote *Mindshadow*, *Borrowed Time*, *Tass Times In Tonetown* and that technology that I used for the graphic rendering ended up in *Bard's Tale*." Rebecca adds that much of her work on *The Bard's Tale*'s earliest games were more behind-the-scenes elements, features such as the art tools, the graphics engines and the disc drivers.

"The major impetus behind *Bard's Tale*," states Brian, "was to make sure that we brought the world to life as best we could. Even though the simple animation on the portraits was small, it gave it a certain charm that people really loved. And we knew we wanted music so integrating a Bard made perfect sense." That Bard character became an integral part of the gameplay, too, a facet that helped the transition from the original working title of *Shadow Snare* to *The Bard's Tale*. The inclusion of music brought a whole new level of quality to the RPG, but more than that the Bard could enact a set of unique spells that would assist the party. These would enable buffs that could affect the game in some way, from improving your group's damage or defence, healing their wounds or even lighting dark dungeons so you can find your way. It was a totally new concept that empowered the gameplay, and gave it a much greater sense of depth to its combat system. *The Bard's Tale* would release in 1985, published by Electronic Arts for the Apple II and was met with incredible critical and commercial success. Rebecca, who knew the game's code inside out, was then put to work on its ports, and the game would also be released on a number of systems, from DOS and Amiga to the C64, ZX Spectrum and even the NES.

Rogue's Gallery A-Z





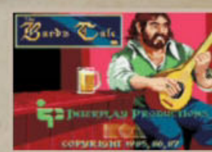
This success of *The Bard's Tale* made it Interplay's first number one hit, and it really helped put the company on the map. With the release of this one game Interplay could afford to expand, taking on more developers, starting more projects of its own and even publishing the creations of other developers, too. Yet even before the company's boom that came with the release of *The Bard's Tale*, a sequel was already being planned. But there was a problem; *The Bard's Tale*'s development hadn't been a totally smooth process, and because of personnel rather than any particular development worries. Its designer, Michael Cranford, became frustrated with Rebecca's input in the game, and the two would clash over design elements, ranging from the game's difficulty – which it later became notorious for – to the exclusion of playable female characters. As a result, Mike enacted a rather brash move to protect what he deemed his game by holding the final disc of *The Bard's Tale* to ransom. "Mike held the disc hostage from Brian," says Rebecca, "and I mean Brian was pissed off at that." Mike demanded that a contract be drafted up that would give him complete control over the development of the next game, and in doing so he would release the final version of the game to Brian. "The contract that was signed was one where it gave Mike a carte blanche to do whatever he wanted with the sequel," adds Rebecca. "It's his game, nobody had any extra involvement, nobody got to say anything about the game – because he was actually more pissed off at me." And so a sequel went ahead, Mike would make the RPG that he wanted with little input from anyone else.



> "Wizardry was a major influence and set the bar for how deep and interesting you could simulate crawling around in dungeons"
> Brian Fargo

» [Commodore 64] Different versions of the game also had different enemies appearing when exploring, making some easier early on than others.

Though the sequel would use the same graphical engine as its predecessor, many more features would be added to the core gameplay. "I know that Mike really wanted to expand on the classes and have the outdoors be part of the experience," claims Brian. "In the first game you were either in Skara Brae, a dungeon or a tower so it felt fairly constrained and he wanted a broader sense of a world. And Mike really ramped up the difficulty a bit with his game by introducing these real-time events that had to be solved. Bigger and harder seemed to driving mantra there." And it was true: if the first game was difficult, then it didn't hold a candle to the sequel. "This is how he told me, years ago," adds Rebecca, "it was that he honestly believes that the Dungeon Master is a player – and if the party is all killed then the Dungeon Master wins. And he actually took this glee in killing off the party. Well, he took that a little bit into his games as well, in that he thinks that if a person plays his game and that person gets killed then he's like, 'I win!'" Elements such as real-time puzzles – that required a solution to be discovered before one or all of the party was killed – added a new level of tension and challenge to the game. Other puzzles required entering passwords that could only be learnt in certain parts of the map, and without that information you couldn't proceed. Combat was expanded, too, and led to the addition of ranged combat, many more magic spells, bard songs and even the ability to summon extra beasts to assist the party. Mike was especially religious, too, and rather than set the game in Skara Brae – as was the case with the previous game – named each of the game's cities after locations in the New Testament. *The Bard's Tale II: The Destiny Knight* released for Apple II a year after ▶



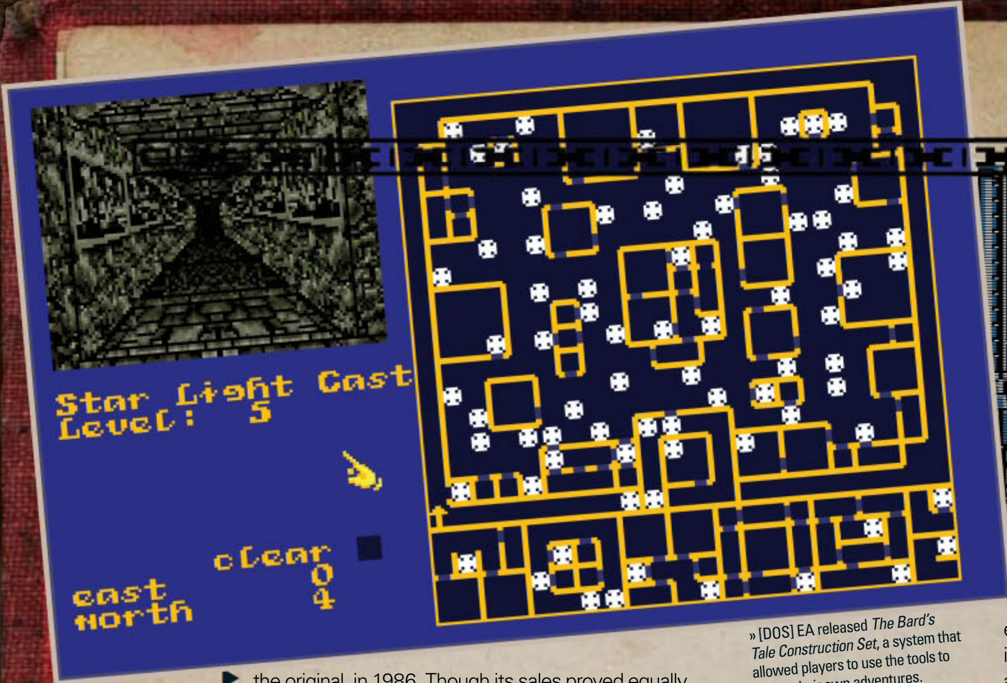
» [Atari ST] The original plan for the feature was to mimic this famous loading screen and call it The Barnes' Tale. We couldn't find a lute though…



» [Apple IIGS] The inclusion of a wilderness in *Bard's Tale II* gave a good amount of extra places to explore – feeling like a more fully-formed RPG experience.







» [DOS] EA released *The Bard's Tale Construction Set*, a system that allowed players to use the tools to create their own adventures.



» [Apple II] Tarjan was the ultimate enemy of the original game, and returned in the third as Rebecca Heineman hoped to pretend the second never happened.

the original, in 1986. Though its sales proved equally as popular as the predecessor, its critical success was varied – some praised the new additions, while others were not fond of the difficulty. Once again, Rebecca worked on its conversions to the Apple IIGS, C64, DOS and Amiga, with the various ports releasing over the course on 1986, 1987 and 1988.

"*Bard's Tale II* was done but that had really very little involvement with Interplay," says Rebecca, "other than Todd Camaster doing art and Interplay doing QA. And that was really all their involvement, which was also the reason that I think the game was very hard because it was never balanced. Well, after *Bard's Tale II* was done, [Interplay] just said 'forget it, we don't want to do this anymore.' Brian negotiated some sort of contract which essentially ended the relationship [with Michael Cranford] and Brian really wanted to work on a new game, which he was doing with another friend Alan Pavlish that would eventually become *Wasteland*." The series may well have ended there if not for Rebecca's insistence; after having spent a considerable amount of time working on the code of *The Bard's Tale* – from coding elements such as the graphics engines to the numerous ports it received – she felt devoted to the franchise, and wanted to give a third title a shot.

"I took over the project," says Rebecca, adding, "we were a skeleton crew. *Wasteland* had a team of about 15 people, we did *Bard's Tale III* with four. The four people were myself, Todd Camasta, Mike Stackpole – who was only really on the project for a couple of months, because he just wrote the base story – and then we had Kurt Heiden who did the music for me." Despite the varied work she had took part in at Interplay, Rebecca had mostly worked on ports of other existing games. Here she was able to take *The Bard's Tale* game and really improve on it, and make it a game that was worthy of the fanbase it had built up. "The first thing I did was delete all of Michael Cranford's code," she says, "just because it was so bad. I went in with a clean sheet of paper – which is essentially what I did for the *Bard's Tale IIGS* version – and rewrote the engine, because I had to do it on 16-bit processors and stuff." Rebecca used much of the techniques she had learnt in creating engines for the Apple IIGS versions of the previous *Bard's Tale* games and adapted it even further. "I actually created a little language that was designed to write RPGs, and the language would be something like 'If at this square, then do this event, otherwise do that event' – it had a branch tree, sort of, and it was all done in this interpreted language so all I stored was a minimal amount of data and all the text. And I put in compressed text – which was something I did in *Bard's Tale*, *Bard's Tale II* and *Bard's Tale III* for the IIGS because I needed to save space." This meant a great deal of data space was saved for the third outing of the series, allowing for much more content to be added in without requiring too many floppy discs. "I had several different worlds, I had several outdoor maps – which were arbitrary sizes, which allowed me to have 3D mazes. And because the maps could be any size I was really only limited by how much memory I had, I could have anything I wanted."

> "EA had a real bad taste in their mouth about the franchise because EA's attempts to do their own variant on it just met with a very expensive failure"
> Rebecca Heineman

The improvements to *The Bard's Tale III* – which was released in 1988 on Apple II and C64 with the subtitle of Thief Of Fate – made it the most jam-packed RPG from Interplay to date. The game managed to maintain the series' popularity and even beat the company's own *Wasteland* – which had a considerably larger budget behind it – in terms of sales and long-term popularity. It might not surprise to learn that a fourth was in the works, but sadly it never came to fruition; this was, suggests Rebecca, all down to 'business'. Work had already begun on the fourth entry, with Rebecca once again at the helm and managing to reduce the code size down so considerably that numerous new features could be included. "After [the release of *Thief Of Fate*] I started working on *Bard's Tale IV*, and we were going to do it set in another area where magic is outlawed and so forth, I wanted to do some new storylines in there. But during this time Interplay was changing from a developer who was doing games for publishers, to being a publisher itself," states Rebecca "The



You Are Here

10 of the most interesting locations in Skara Brae



HARKYN'S CASTLE

■ It's the most prominent location of the city, but as with much of Skara Brae, there's not much hope for any who enter. You'll need to fight through multiple Guardian Statues to survive this dungeon.

ROSCOE'S ENERGY EMPORIUM



■ As powerful as mages can be, the demand spellcasting puts on their energy levels can be a struggle to contend with. Visit Roscoe's to restore your spellpoints – for a rather large fee, of course.

ADVENTURER'S GUILD



■ This is where all good adventures begin, but you'll need to visit here any time you want to swap out your party for different characters - or even find brand new adventurers to add to your group.



KYLEARAN'S AMBER TOWER

■ The powerful Archmage Kylearan might be secretive – holed up in this tower behind locked iron gates – but if you survive his labyrinth of traps and beasts he'll be sure to reward you.





CITY GATES

■ With a snowstorm raging outside it looks like you won't be leaving Skara Brae any time soon. In *Bard's Tale III*, it's these same gates you'll enter through.



REVIEW BOARD

■ As perhaps the single most important location for all budding adventurers, you'll need to visit the Review Board once you've acquired enough experience points to level up.



GARTH'S EQUIPMENT SHOPPE

■ You'll obviously need to stock up on weapons and armour if you want to survive the constantly mean streets of Skara Brae. Of course only the best weapons will need to be recovered from treasure hoards.



THE MAD GOD TEMPLE

■ The crazed mage Tarjan – known by his followers as the Mad God – has built a dungeon within the catacombs under the Mad God Temple, but it's only available to those who who know the password.



THE TEMPLE DISTRICT

■ There are as many temples as inns in Skara Brae, but the central courtyard of the town is perhaps the most prominent home for the religious. Visit here if any in your party need healing.

SCARLET BARD INN

■ There are numerous inns throughout Skara Brae where you and your party can gather for drinks. The Scarlet Bard, however, has its own problems to contend with in the cellar – and Skara Brae's initial dungeon.



money we earned from *Bard's Tale III* and *Wasteland* was enough that we were actually able to finance our own games. We needed to find a distributor, because while we were a publisher we really didn't want to make the packages. Well EA, because we were making them so much money, said 'sure, we'll be your distributor' – [so the games were] distributed by EA and published by Interplay."

However Activision, also known as the distributor, Mediagenic at the time, contacted Interplay, recalling the profits it had made on Interplay's early text adventures in the hopes of working with company once more. It offered a similar deal, but one that would take less of a percentage than what EA was offering. Seeing the obvious business sense in the offer Brian Fargo signed the deal, and the two games that Interplay would first publish in-house – *Neuromancer* and *Battle Chess* – would be distributed through Mediagenic. "Well, that didn't sit well with EA," claims Rebecca. "They were pissed. The trouble was that when we signed a deal for *The Bard's Tale* and *Wasteland*, we did it as a work-for-hire publishing deal in which the intellectual property for these games becomes property of EA. So EA said, 'well, fine then, we're just not going to have a *Bard's Tale IV*, we are not going to do a *Wasteland 2*, we're not going to let you do anything with these IPs, unless you of sign a deal to do distribution with us'. And at that point Brian rightfully told them 'no.'" Work on further ports for *The Bard's Tale III* were immediately scrapped as a result, while all the effort that had gone into *Bard's Tale IV* had to be diverted. The game would eventually release under the name of *Dragon Wars* in 1989 for Apple II, among numerous other ports.



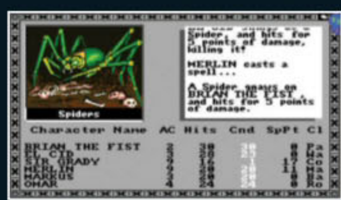
» [DOS] Though *Dragon Wars* wasn't a *Bard's Tale* game, there were a lot of similarities between the titles.



» [ZX Spectrum] *The Bard's Tale* was ported over to the most platforms, even the likes of the Speccy and C64.

Conversion Capers

The bard's tale is one that's been told many times…



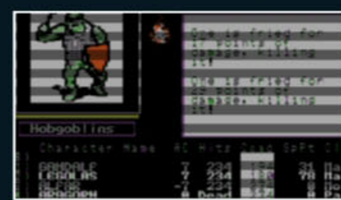
AMIGA

■ The Amiga, like many ports from DOS and Apple II, suffered thanks to its pauses caused by load times. They weren't by any stretch unbearable, and this version makes a good go of the artwork the game was known for.



AMSTRAD CPC

■ The limitations of the hardware meant that the Amstrad version was hardly able to keep up with its bigger brothers, but it still offered a very slick and functional experience with all the core gameplay elements still intact.



APPLE II

■ Though original release for *The Bard's Tale* was on Apple II, it wasn't the best version for long, it still offered better art and sound than its competitors. It utilised a text-entry spellcasting mechanic that other versions would mimic.



APPLE IIGS

■ Understandably – as the most powerful Apple machine at the time – the Apple IIGS version of the game was one of, if not the best, versions of *The Bard's Tale*. Much better art and sound made the game really stand out, while animations added extra life to the world.



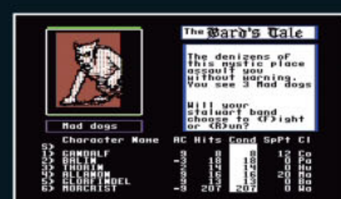
APPLE MACINTOSH

■ This colourless version offers a certain charm, but when compared to the more capable machines it obviously doesn't match up. Input was changed quite heavily to be playable with the mouse and cursor. One of the most unique ports of the game.



ATARI ST

■ The Atari ST version would end up comparable to the IIGS version, with the same high-quality art and sound. It even made use of the animated movement effect when wandering around Skara Brae or different dungeons, something that most versions couldn't handle.



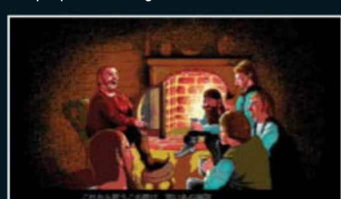
COMMODORE 64

■ It was impossible to overlook the C64 as a machine, but it just wasn't technically capable of matching the more powerful hardware available at the time. All the same, though, it replicated the gameplay of the Apple II version just as well with no costs to design or play.



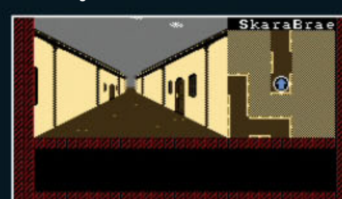
DOS

■ Perhaps one of the more popular versions of the game, the DOS version actually didn't have quite as many bells and whistles as the Apple IIGS and Atari ST equivalents. Its art was slightly worse (albeit only really in the town itself), but it was still one of the better versions.



NEC-9801

■ The art for the Japanese version of the game was adapted in a number of ways, but the core gameplay remained the same. Extra effort went into making quality art where possible, but the machine just wasn't as powerful – and so alterations needed to be made.



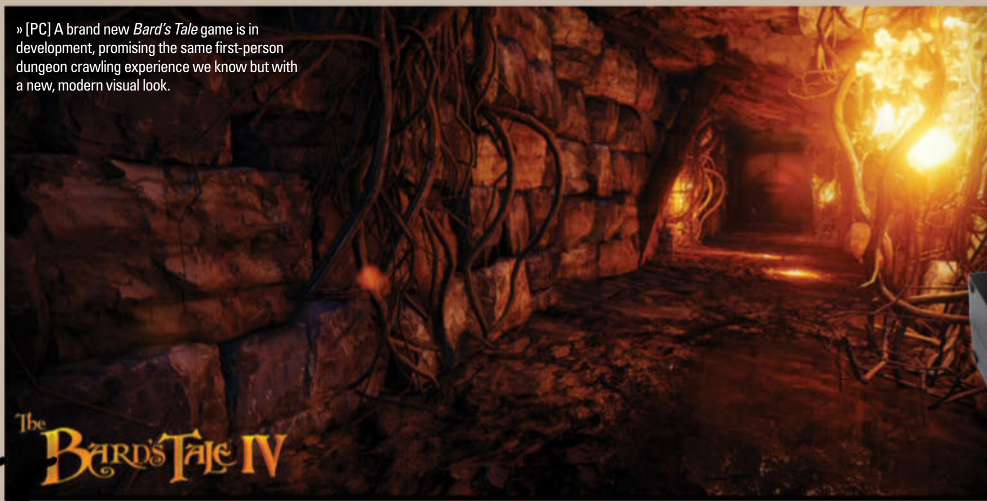
NES

■ Though the mechanics all remained the same, the NES title was changed more than any other port. The map was different, the menus and options were altered and the visuals were reduced heavily to allow for it to work on the console. It was much easier and linear, too.



ZX SPECTRUM

■ This one is easily the weakest port of them all, but that's not a surprise considering the effort involved in getting the game to run on the hardware. Very poor art was its biggest downfall, but for the most part, the design of the game was the same.



» [PC] A brand new *Bard's Tale* game is in development, promising the same first-person dungeon crawling experience we know but with a new, modern visual look.

> "Cranford held the disc hostage from Brian, and Brian was pissed off at that. Cranford was more pissed off at me"
> Rebecca Heineman

Despite such opposition, this would not become how the franchise would end. EA itself had attempted – unknown to Interplay – to create a *Bard's Tale IV*, a project that continued to be delayed until eventually an executive decided to cancel the game. Rebecca, too, had continued her love of the franchise, and even attempted to work with EA on another new entry for the franchise years later. "We sent a demo to EA in 1999," she tells us, though the pitch would only fall on deaf ears. "At that point EA had a real bad taste in their mouth about the franchise because even though it made them a boatload of money when Interplay was working on it, EA's attempts to do their own variant on it just met with a very expensive failure. But when I was trying to pitch it, I didn't know the producer I was pitching it to was also the guy who killed EA's *Bard's Tale IV*." EA did release a *Bard's Tale Construction Set* in 1991 for DOS and Amiga with it being developed by Tim Cain and built off the code of *Bard's Tale III*, but the company simply had no interest in working on the franchise anymore. And so it would be that the beleaguered series had reached a rather untimely end. That is, until now.

With the rise of Kickstarter giving a rebirth to nostalgic gaming experiences and revitalising numerous long-dead retro titles and genres, Brian Fargo and InXile Entertainment has returned off the back of *Wasteland 2* to see a new, modern entry into *The Bard's Tale* series. "I've been watching technology achieve new heights in realism and graphic awesomeness and always thought a classic dungeon crawl could look incredible," says Brian. "We have so many advantages with this kind of game to max out what the new engines and physics algorithms can do. Our kind of game is single-player and combat isn't in real time; this frees up processing power for us to make games that would normally look like a graphic demo. In fact when we released our first in engine demo we had a lot of comments that it wasn't real or was pre-rendered, all of which wasn't true." Having reached its goal of $1.2 million dollars on Kickstarter, *The Bard's Tard IV* will finally go ahead, over 16 years since the previous true *Bard's Tale* game. It may well be a rebirth for the franchise, and could even pump new life into the dungeon crawling RPG genre. Even Rebecca is working on her own Kickstarter, alongside veteran developers, to relive her passion for that classic *Bard's Tale* RPG gameplay. *Dragons Of The Rip* is to be an imagining of what a new *Dragon Wars* would look like, and promises the gameplay of *The Bard's Tale* with brand new twists – in terms of both gameplay and story. While it might've once looked like *The Bard's Tale* franchise would be forever lost to the annals of history, it seems it's back – and could perhaps be bigger than ever. *



» Spells will continue to play a key part in *The Bard's Tale IV*. We wouldn't want to mess with this dangerous looking wizard.





The Naughty Bard

A new direction for the series

With the rift between Interplay and EA casting doubts over franchise's existence, it was a surprise that this InXile Entertainment-developed PS2 title was ever given a release. But in truth it was a dramatically different experience, much to the distaste of many fans – who had longed for a true RPG successor. Released in 2004, this hack-and-slash RPG ran on the Snowblind Engine – the same tools that had powered *Baldur's Gate: Dark Alliance* and *Champions Of Norrath*, and that had caused Interplay to become embroiled in a lawsuit with developer Snowblind Studios. The game, however, offered a more tongue-in-cheek approach to RPG gaming, and poked fun at a lot of common, and tired, RPG devices, such as wolves that inexplicably carry gold coins for loot or initial quests that task you with killing rats. The humorous tone was met with equal parts disdain and praise, depending on the familiarity with the name '*Bard's Tale*', but forwent so many existing elements from the previous games that the only thing they shared was the title. It was an attempt by InXile Entertainment to create a modern RPG, and it managed to build up a small cult-following all the same. To those involved with the originals, however, it wasn't considered to be a *Bard's Tale* game, and its poor reception at retail meant that this new direction never took off for the franchise. If you're a fan of the series, you'll likely count that as a blessing.





CLASSIC MOMENTS

Astro Boy: Omega Factor

» **PLATFORM:** Game Boy Advance » **DEVELOPER:** Treasure/Hitmaker » **RELEASED:** 2003

The three-eyed prince Sharaku is a pretty nasty piece of work – after all, his goal is to take control of the world across all of space and time, and that involves destroying all robots. Here, you're playing as Astro Boy, so that means you've got a bit of a problem on your hands. There's only one way to resolve this conflict, and that's to take part in the kind of aerial duel that Astro Boy was built for.

He'll start off by attacking you with a red spear. Not just any red spear, mind – one that he throws in an arc, creating a trail of clones that will shoot straight at Astro. If having to dodge those wasn't enough, Sharaku complicates things further by summoning mystical beasts to fly around the screen and attack you, as well as dropping rocks on your head. While he's not the final boss, this fearsome arsenal makes the fight against Sharaku a particularly tense encounter – one you'll be very grateful to survive. *

BIO

Astro Boy has become one of Japanese pop culture's most enduring icons since his Fifties debut, with 100 million copies of the manga sold and all manner of tie-in products made. When the third animated TV adaptation of the story was being produced in 2003, Sega picked up the licence and produced games for the PlayStation 2 and Game Boy Advance. While the former effort from Sonic Team was forgettable, action masters Treasure and Sega's Hitmaker studio teamed up to create a truly spectacular beat-'em-up that ranks as one of the best exclusives available for the portable platform.



MORE CLASSIC ASTRO BOY: OMEGA FACTOR MOMENTS



Bombs Away



Astro Boy might not look like much, but he's an agile fighter with some awesomely powerful moves. Whether you're knocking enemies down like dominoes with a swift kick or demolishing everything in your path with an enormous arm laser, you'll always feel like a wrecking machine – and better yet, you get to use these cool abilities very frequently!

Jet Propelled



It's no surprise to see Astro Boy taking to the skies to keep the peace, as developer Treasure is known as a master of both action games and shooting games. While the large sprites can sometimes mean that the screen feels a little crowded at times, these exciting moments provide some excellent variation from the main beat-'em-up action.

Friend Or Foe?



The poor little robot Pook has fallen in with thieves, but they've promised him his freedom – if he can defeat Astro. As an early boss, this isn't a tough encounter, but Pook's various animal-themed transformations keep things interesting. Not only is the fight cool, but it's a neat call back to Treasure's history with the transforming boss Seven Force from *Gunstar Heroes*.

You're A Hero



You might have reached the end credits, but the game isn't over by a long shot. The newly unlocked Level Select mode isn't just a novelty – with it, the game switches from Birth to Rebirth mode, allowing you to replay stages in a non-linear fashion to meet new characters, change the past and try to stop the destruction of all robots by Death Mask.

The Budget BBC

An Acorn Electron Retrospective

They say mighty oaks grow from little acorns but in the case of the Electron, it was the other way around. David Crookes talks to Acorn's tech genius Steve Furber and its co-founder Christopher Curry about the budget version of the BBC Micro



When tasked with creating the Acorn Electron, the team weren't too keen on the task. "We didn't want to do it," says Steve Furber. "I recall the technical team was not enthusiastic about it." But the idea was out there and Christopher Curry, who co-founded Acorn Computers alongside Hermann Hauser and Andy Hopper, was not backing down.

Acorn wanted the technical crew to produce a budget version of the BBC Micro Model B to penetrate the newly emerging and popular low-end of the market. The Electron was to be half the size of the computer that was making great waves in schools and it was geared towards parents who wanted to buy a recognisable, seemingly educational computer at a more affordable price.

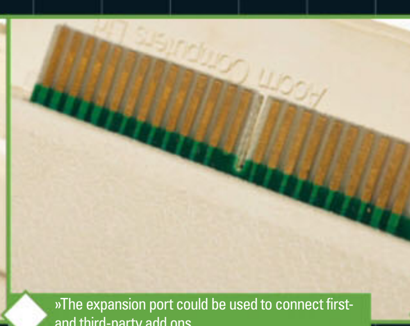
"I also think Chris in particular was keen to try and eat a bit more of Clive Sinclair by attempting to move Acorn down into the section of the ZX Spectrum," Steve adds. "But our sense was that the right direction for Acorn was to go upwards and onwards rather than downwards and backwards."

It was 1982 and Sinclair had been making a huge impact on the computer market. The ZX81 cost £69.95 fully built (£20 less as a kit) and it was shifting 40,000 units each month. The ZX Spectrum had just been unveiled and its price was set at a fair £125 for the 16KB model and £175 for the 48KB. Acorn's BBC Micro Model B was £400 but while it went on to sell 1.5 million, Chris felt his company was set to miss a vital budget-end marketplace.

There was also some fierce rivalry to address. Chris had worked for Sinclair for 13 years but, following an argument, he jumped ship and jointly set up Cambridge Processor Unit Limited in December 1978. Three months later, Acorn



» Connect away to a colour or black-and-white TV, monitor and tape recorder.



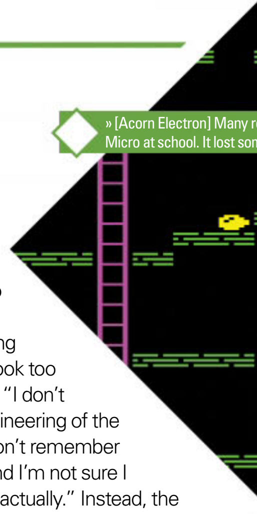
»The expansion port could be used to connect first- and third-party add ons.



» The Acorn branding was used for this machine, dropping the BBC label.



“Our sense was that the right direction for Acorn was to go onwards, rather than backwards”



» [Acorn Electron] Many recall *Chuckie Egg* running on the BBC Micro at school. It lost some speed on the Electron, though.



» There were 10 user-definable function keys but no red ones.

Computers was born, debuting with the well-received System 1 machine which had helped Acorn gain enough kudos to win its fight against Sinclair over the lucrative rights to produce computers for the BBC.

By producing a stripped down and cheaper version of the Electron, Acorn believed it was able to achieve two things: a foothold in a strong, emerging sector of the market, and another finger in the eye of Sir Clive. "I have no regrets," Chris tells us. "We needed something that could be priced near enough to compete with the main competition, the Spectrum. We had to take away a lot of the frills that were built into the BBC Micro, call it an Acorn product so that we didn't have to pay royalties to the BBC and have freedom over the prices. We also had to produce something that would be extendable beyond the BBC Micro. And that's what we did. We looked into producing a future-proof product."

The Electron was effectively an attack on the Spectrum line but it was also pitched as a rival to the Oric and Dragon computers. "It will have a massive impact on the sales of these machines," Chris told *Acorn User* magazine. Yet there were misgivings. "There was a feeling that we should stay superior and above the marketplace," Chris tells us. "But the [budget end] was a big marketplace. We were faced with a technical challenge but it was an interesting one. We ended up with a terrific product."

Given the intention was to primarily blow the Spectrum out of the water, it is surprising that the design team didn't look too closely at Sinclair's machine. "I don't think we did any reverse engineering of the Spectrum," says Steve. "I don't remember taking the Spectrum apart and I'm not sure I ever touched the Spectrum, actually." Instead, the process was about solely looking at the BBC Micro and slashing the number of chips in the machine.

Rather than have 102 as in the Micro, Furber and the team were able to get the Electron down to around a dozen including a 6502A microprocessor running at 2Mhz, two 16k memory chips, four RAM chips, nine simple TTL chips, a quad-operational amplifier chip and – most importantly – a single Uncommitted Logic Array (ULA) chip which attempted to take on board all of the key functionality of the ones that were being axed. This essentially created a system on a chip and it allowed the Electron to be placed in a box that was far smaller than the Micro. "We had to do much heavier integration on the ULA," says Steve. "But there were various other things we did specifically for cost reduction that compromised performance a bit."





ELECTRON VS MICRO

How the Electron shapes up to its counterpart

SLOW SPEEDS

■ The Electron had the same CPU but the system was up to 40 per cent slower than the BBC. The ROM was accessed at faster speeds than the RAM. Each byte had to be fetched twice.

NO 6845 CRTC CHIP

■ The BBC's graphics were controlled by the 6845 CRTC plus a video ULA to provide the colour palette. The Electron's ULA combined these chips. It meant sideways scrolling in games was not instantly available on the Electron.

HARDWARE INCOMPATIBILITY

■ If a program was hardware-specific and tried to access aspects of the BBC Micro, then it would not run properly on a bare Electron because of the integration of so many chips into the single ULA.

NO MODE 7

■ Mode 7 was used for Teletext and it allowed for double height and flashing characters, taking up 1KB of memory. The Electron didn't have it since the designers had chopped the SAA505 chip.

ONE SOUND CHANNEL

■ The sound channels of the Micro were turned into three virtual ones that were then incorporated into a single physical channel on the Electron. It meant the Micro-style of music was not possible on the cut-down machine.

SLICKER KEYBOARD

■ The Electron had the most efficient of the two computer keyboards. With 56 keys – 18 fewer than the BBC Micro – it most noticeably did away with the physical red function keys and allowed user-definable function keys instead.



» The BBC Micro and the Acorn Electron used MOS Technology 6502 processors.



» Beneath the BBC keyboard were expansion ROM slots. The Electron had two additional ROM slots.

> "We needed something that could be priced near enough to compete with the main competition, the Spectrum"
>
> Christopher Curry







It was a tough ask and the team began to struggle. The graphics of the Electron and Micro were set to be the same by and large but one problem that had to be overcome was an issue with the video ULA. "It was a major concern," says Steve, pointing to the difficulties in pushing the video ULA to the limits by running it at 16MHz in order to gain a 640x256 resolution in Mode 0. "We had been extremely careful when we designed that bit of the Electron ULA but we still had some display break-up problems, and I had quite a long wrangle with Ferranti over what the cause of these was and what the appropriate fix would be," Steve explains.

Ferranti assumed the design wasn't right; that the Acorn team hadn't designed it fully to its specification. But while that was an accusation that could easily have been levelled at the BBC Micro video processor ("it was not well designed to spec, and they used some design techniques that were scary," admits Steve), it was more difficult to justify with the new machine. "On the Electron we were careful to implement the high speed part in a different way to make sure if the logic worked to spec then the chip would be reliable," says Steve. "But it wasn't. And that's because the chip wasn't working to spec, not because the design wasn't."

Yet the ULA wasn't the only issue, compromises had to be made. "I think we had four accesses to the memory per microsecond and we used two for the video and two for the processor interleaved and so nothing slowed anything else down," Steve adds. "On the Electron, if you used a high-res mode then effectively, during the busy 40 microseconds of the scan time, the process had no access to the memory. If you used a lower resolution display mode then you got some access back. Basically, we halved the available memory bandwidth and that compromised the display, or the processor, or both a bit."

But it was important that they tried to resolve the issues because software produced for the Micro

ESSENTIAL EXCLUSIVES

The games that made the Electron sing



QUEST 1983

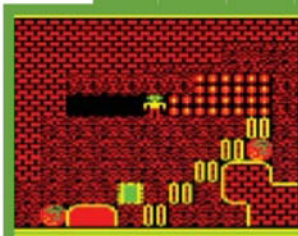
■ This game is a good example of how programmers sought to get the most out of the Electron. Tony Oakden used the Electron's detailed Mode 1 for this arcade-adventure but to get more than four colours on the screen, he used the dithering technique. It mixed two or more colours in a chequered pattern to give the clever illusion of extra colours.



ELITE 1984

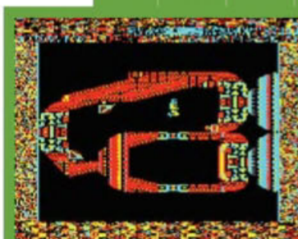
■ David Braben did not like the video restrictions of the Electron hardware yet he and Ian Bell still managed to get *Elite* working on Acorn's cut-down machine. Some elements were chopped (it only had five ships compared to the BBC Micro's six on tape and 18 on disc) and it was also black and white, but it was still out of this world.

> "I've still got an Electron lying around and it still seems to work"
>
> Steve Furber



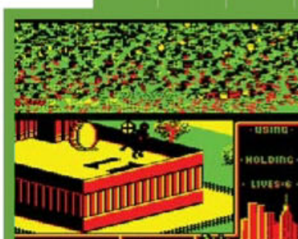
REPTON 1985

■ Created by Tim Tyler, *Repton* struck gamers with its reptilian hero and 12 levels of brain-teasing, *Boulder Dash*-style fun. The game involved finding diamonds while avoiding creatures and falling boulders and it was so popular that the series as a whole shifted 125,000. Superior boss Richard Hanson reckoned *Repton* would still be enjoyable in 100 years.



EXILE 1988

■ If you must play just one game, make it Peter Irvin and Jeremy Smith's action-adventure, *Exile*. It may have just four on-screen colours and non-graphical data visible in the display buffer but it got around the Electron's side-scrolling restrictions and it chucked everything it could at the Electron to get the most out of it. The physics engine was amazing.



THE LAST NINJA 2 1989

■ It wasn't originally written on the Acorn Electron, yet this port deserves a play if only to stare, open-mouthed at what is playing out on the colourful screen. Coded by the talented Peter Scott and published by Superior Software, this was one of the best conversions on any platform not least because the code was somehow shoehorned into 32K.



MORE BUDGET SYSTEMS Other machines that were cut-down versions of the originals

COMMODORE 116

■ Originally envisaged for the US market at a price point of $49, the Commodore 116 was only released in Germany and some parts of Eastern Europe. Released in 1984, it was a cheaper version of the Commodore 16 with a cheap quality rubber chiclet keyboard and a smaller case.



© Toni Birer

RADIO SHACK TRS-80 MC-10

■ This budget version of the 1980 TRS-80 Color Computer lasted a year when it launched in 1983, not surprising given its 4K of (expandable) RAM paled compared to the Color Computer 2 which came out in the same year. It was well behind the march of the 64K machines competing against it.



© Jeff Keyzer

AMIGA 600

■ There wasn't much, in terms of functionality, between the Amiga A500+ and the A600 and neither was there a great price difference either. Still, it made a dramatic cut by removing the numeric keyboard, shortening the length of the machine. The A600 was going to be a cheaper A300 alternative to the A500+.



SEGA MEGA DRIVE II

■ For better or for worse Sega had an intense habit of clinging on to its consoles to extend their life. The Mega Drive II was a smaller version of the original machine, omitting RF TV output, volume control and the headphone jack. The Master System also received similar treatment years earlier, removing the card port among other functions.



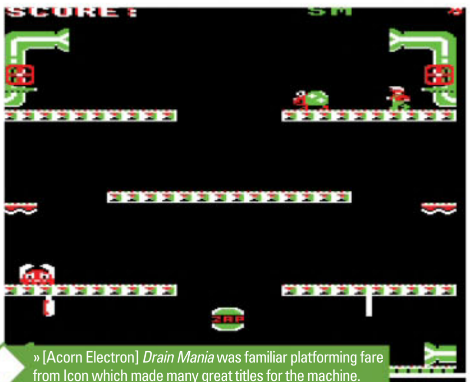
© Bill Bertram

GAME BOY MICRO

■ Debuting in 2005, the Game Boy Micro was a cheaper and smaller version of the Game Boy Advance SP but it left out a useful feature: the ability to play Game Boy and Game Boy Color games. Still, the tiny console was customisable and small enough to fit rather comfortably in your pocket.



© Evan-Amos



» [Acorn Electron] *Drain Mania* was familiar platforming fare from Icon which made many great titles for the machine.



» [Acorn Electron] Most games that debuted on the BBC Micro were ported to the Electron including this, *Felix In The Factory*.



» [Acorn Electron] It sounds gross but *Kissin' Kousins* is a fast, colourful and challenging platformer.

needed to be greatly compatible with the Electron. "The idea was that it would be BBC based and would run all of the applications the Micro could run," says Chris. Acorn knew the subsequent marketing drive would depend on it and it would also be crucial for enticing customers who wanted the benefits of owning a Beeb machine without its associated costs.

In the end it became clear that full compatibility would not be possible but that the machine should at least be hardware and software compatible with the features it supported. "There was some loss of performance which was a bit of an incompatibility, but functionally it used the same operating system and the same microprocessor so there was a high degree of compatibility as far as it went until you tried to use a feature that wasn't there," explains Steve.

Speed was affected, though. Benchmarks showed that in comparisons with the BBC Micro, timings varied between the graphics modes. At its worst, the Electron would take 4.3 times as long to run the same program as on the BBC Micro. Tech journalist Paul Beverley noted in *Acorn User* that the 6502A processor was capable of running at 2MHz but it only worked to that speed when accessing ROM. During RAM access, it slowed to 1MHz. "The reason for this is that the read/write memory is arranged in four 64k by 1 bit chips, each of which contains two bits of information for each byte," he wrote. The removal of the 6845 CRT controller chip also slowed down graphics-heavy games.

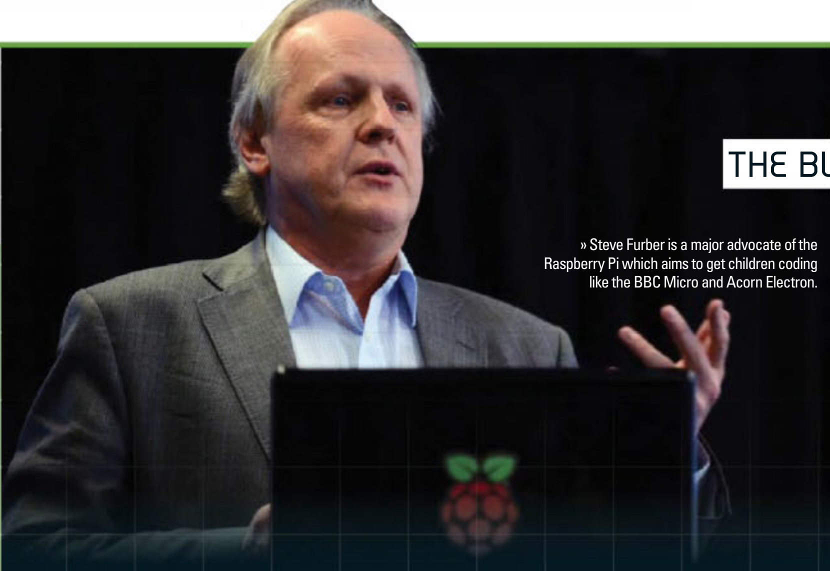
One of the noticeable chip casualties during the tech team's budget-induced cull was the chip which supplied Mode 7, the only one of the eight Micro modes to be dropped. Mode 7 was the default screen mode which took up a kilobyte of memory and allowed the BBC Micro to present hi-res text. It was also the mode made familiar by the BBC's teletext service, Ceefax, and it was an original requirement ordered by the broadcaster. At the same time, the chip allowed the Micro to be used as a Prestel terminal which offered a primitive form of internet. By dropping it, both functionalities were lost.

"It meant the machine was not as compatible with the BBC as it might have been," laments Steve. "It wouldn't run programmes that relied on Mode 7 being there. There were quite a few of those because the Beeb was fairly memory constrained. If you could do what you wanted to do in Mode 7, that only used 1KB of the memory so you had 31KB left for your programme and data, whereas if you used Mode 0 that used 10KB, so the full screen used 20KB, which left you with 12KB for your programme. Mode 7 was very attractive and it would give you a form of full colour graphics with very low memory use."

> **"The machine was not as compatible with the BBC as it might have been"**
> Steve Furber

The hardware differences between the BBC Micro and the Electron meant many programs and games had to be re-written in order to speed them up. Titles such as *Monsters*, *Starship Command* and *Meteors* were re-coded by Acornsoft. Others such as *Rocket Raid* and *Planetoid* suffered from the Electron's lack of sideways scrolling (the latter ported well to the Electron and added features). Electron launch title *Snapper* could not have run in its original form because it used hardware timers not present in the Electron.

Acorn's answer to the loss of certain features was to provide add-on modules that could be plugged into each other. The idea was they could be chosen by consumers to fit their needs. "There were seven different add-on modules in the original plan," Chris says. "We launched the first one a year late but we were looking at having them for multiple controlling and Teletext." The first was a huge general-purpose module called Plus-1 which comprised a printer port, two parallel ROM sockets, a joystick port. Slotted into the back and costing £59, it expanded the Electron's size to a depth matching the BBC Micro.



» Steve Furber is a major advocate of the Raspberry Pi which aims to get children coding like the BBC Micro and Acorn Electron.

LOVING THE ELK

Acorn co-founder Christopher Curry lists his reasons for believing the Electron – which was nicknamed the Elk – deserves its place in computer history

1 It was so much cheaper to make so that it competed directly with our main competitor in the mass consumer market – the ZX Spectrum.

2 **The styling was crisper than the rather ponderous Beeb. The case felt solid and the computer was small enough to carry about with you.**

3 It was labelled Acorn. We had been subjected to a certain amount of identity loss during the Beeb days.

4 **The modular approach enabled 'Horses for Courses' so the initial module did all that a games player/programmer novice needed.**

5 The industrial controller market bought the module they needed. The physical arrangement meant that modules could be daisy-chained and physically bolted to its neighbour for a solid feel rather than a mass of interconnecting wires

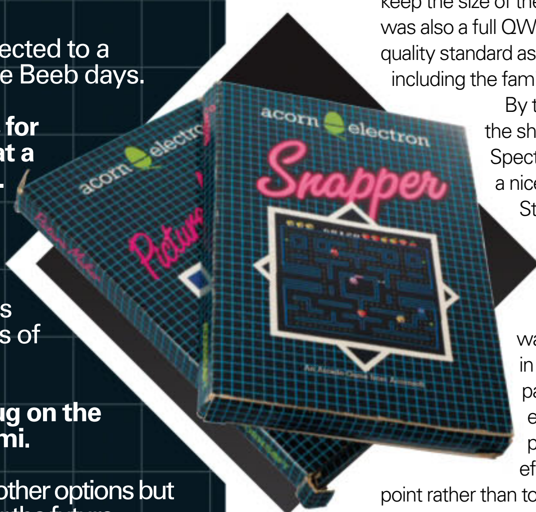
6 **The serious number cruncher would plug on the second processor – a 32-bit from Natsemi.**

7 The modem and the Teletext adaptor were other options but many further modules remained as ideas for the future…

8 **With its huge ULA it was the most advanced custom chip design in the world at the time – pity it was also the biggest fly in the ointment.**

9 It was the inspiration for the Communicator – the networked business machine with remote servers that arrived before the internet!

10 It was also the inspiration for the Keyline shopping Terminal – based on autodial modem and ICL Traderpoint switched networks which, again, emerged before the internet.





The video ULA continued to pose problem, though, and it delayed the project for many months. "The ULAs were marketed strongly on having a very small logic swing but in my view, it was too small. We didn't fix the problem in time for the Christmas 1983 market which was the time when the Electron would have sold really well if it had been available. We got it thoroughly fixed by early 1984 by increasing the voltage swing by about 50 per cent and so we made lots of Electrons that Christmas but by then we'd missed the market and the company was left with quarter of a million unsold Electrons in a warehouse."

The computer had been formally announced on 25 August 1983, a year after it had been talked about but supplies were low with just 30,000 Electrons available for people to buy. Games began to be released that year and demand continued to be high but it wasn't until the following year that things were able to pick up. "There was a concern that the situation had definitely been compromised by technical difficulties," laments Steve.

Even so, with 32KB of RAM and a ROM containing BBC BASIC v2, it was an attractive package, retailing for a palatable £199. Power was fed by an external mains transformer within the large mains plug which helped keep the size of the computer down. The keyboard was also a full QWERTY one but it wasn't to the same quality standard as the BBC Micro (it also lost 18 keys including the familiar red function ones of the Micro).

By this time, the ZX Spectrum was on the shelves and there was talk of a ZX Spectrum+. "But I think the Electron was a nicer machine than the Spectrum," says Steve. "It had a respectable keyboard and it was nicely put together. I've still got an Electron lying around and it still seems to work."

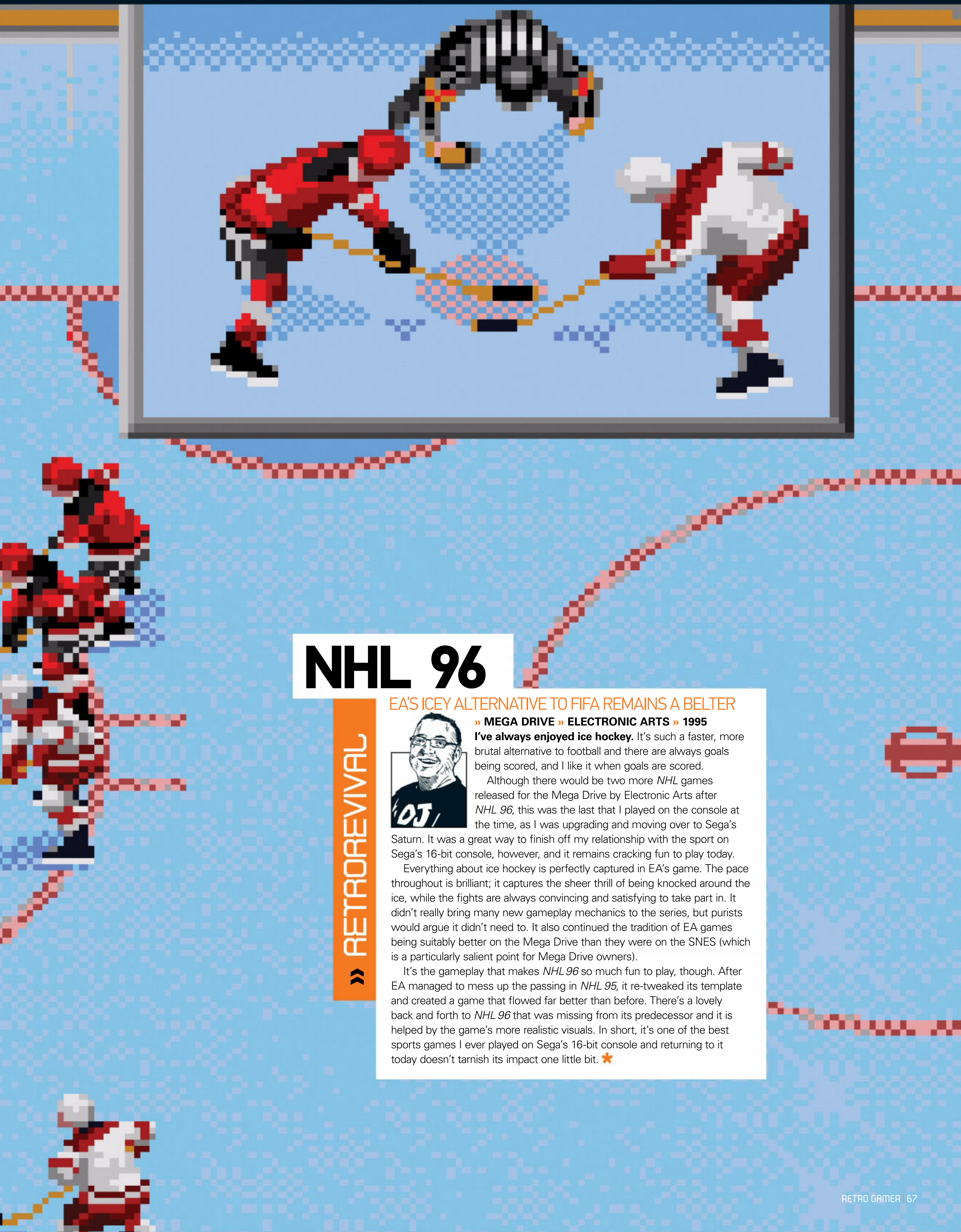
Despite that, Steve believes it was created with the wrong priorities in mind. "It was a nicely integrated package but it was a product engineered to a price point, and I prefer products to be designed cost effectively but to a function and spec point rather than to a cost point," he says. "But in terms of the price point we were aiming for, we got as much functionality in there as was humanly possible if only our functionality had functioned."

The problems meant the Electron had a short lifespan. A price cut to £129 in January 1985 helped to ignite sales, as did a later reduction to a modest £99 but Steve says the computers were being sold at a loss: "There was a large stock, so there was a reasonable market penetration but they stopped making them fairly early on so I'm pretty surprised that software sales lasted that long. The machine cost Acorn a lot of money. Acorn was selling them to Dixons for £50 or so and Dixons was selling them for £99." On the flip side, the Electron did go on to enjoy a long lifespan in software terms at least. Apps and games continued to be produced until the early Nineties.

Steve is philosophical about the Electron's time. "It hurt the company because of the millions it spent building the stock but it didn't hurt the BBC Micro. And shortly after the ARM processor, which we also worked on, turned out to be a runaway success. So the Electron was this thing in the middle that didn't quite turn out as successful. You can't win them all." *

System supplied by The National Videogame Arcade, gamecity.org


4 : 20



» RETROREVIVAL

NHL 96

EA'S ICEY ALTERNATIVE TO FIFA REMAINS A BELTER

» MEGA DRIVE » ELECTRONIC ARTS » 1995

I've always enjoyed ice hockey. It's such a faster, more brutal alternative to football and there are always goals being scored, and I like it when goals are scored.

Although there would be two more *NHL* games released for the Mega Drive by Electronic Arts after *NHL 96*, this was the last that I played on the console at the time, as I was upgrading and moving over to Sega's Saturn. It was a great way to finish off my relationship with the sport on Sega's 16-bit console, however, and it remains cracking fun to play today.

Everything about ice hockey is perfectly captured in EA's game. The pace throughout is brilliant; it captures the sheer thrill of being knocked around the ice, while the fights are always convincing and satisfying to take part in. It didn't really bring many new gameplay mechanics to the series, but purists would argue it didn't need to. It also continued the tradition of EA games being suitably better on the Mega Drive than they were on the SNES (which is a particularly salient point for Mega Drive owners).

It's the gameplay that makes *NHL 96* so much fun to play, though. After EA managed to mess up the passing in *NHL 95*, it re-tweaked its template and created a game that flowed far better than before. There's a lovely back and forth to *NHL 96* that was missing from its predecessor and it is helped by the game's more realistic visuals. In short, it's one of the best sports games I ever played on Sega's 16-bit console and returning to it today doesn't tarnish its impact one little bit. *



Top 25 PC Engine Games



NEC's machine might have been tiny, but it made a huge impression on gamers. Nick Thorpe counts down your favourite games for this powerhouse…



Bloody Wolf

■ **DEVELOPER:** Data East
■ **YEAR:** 1989 ■ **GENRE:** Run-and-gun

25 Data East couldn't quite do an arcade-perfect version of *Bloody Wolf*, as this home version omitted the two-player option. However, the developer more than made up for it by expanding the game with larger stages and an extra level, as well as including more dialogue and music. If you're looking for run-and-gun action on the PC Engine, this is your game – how many other games let you gun people down from a motorbike?

Gekisha Boy

■ **DEVELOPER:** Tomcat System
■ **YEAR:** 1992 ■ **GENRE:** Action

24 This bizarre snap-'em-up is one of the most unique games to appear on any system. You play a photographer whose goal is to photograph bizarre occurrences that take place around him, from flashers and alien abductions to plane crashes and fights. You've got to do all this while avoiding the various hazards around the stages, which can cause you to drop precious film if they hit you. While the levels are practically impossible to beat without memorisation, the unique premise and bizarre sense of humour elevate *Gekisha Boy* into your top 25.





Side Arms

■ **DEVELOPER:** NEC Avenue
■ **YEAR:** 1989 ■ **GENRE:** Shoot-'em-up

23 While Capcom couldn't convert *Side Arms* to the PC Engine itself due to its Nintendo contract, NEC Avenue secured the licence for the game and did a rather excellent version of its own, helping the console's reputation as a destination for excellent arcade conversions. An enhanced CD release also exists, though like many of the best CD titles it's Japan-only unfortunately.





Magical Chase

■ **DEVELOPER:** Palsoft ■ **YEAR:** 1991
■ **GENRE:** Shoot-'em-up

22 This shoot-'em-up is well-known amongst North American Turbografx-16 collectors as a rare and expensive late release for the system – even the Japanese original commands a hefty price. However, this is no expensive duffer – *Magical Chase* is an excellent shoot-'em-up which shows off the PC Engine's graphical capabilities by shifting a lot of sprites around at high speeds.

Magical Chase isn't immediately intuitive as many games of its genre due to the inclusion of Topsy and Turvy, the little stars that accompany Ripple on her journey which shift around according to your movement, and function as both secondary fire and shielding. However, once you're used to them they prove incredibly useful in making your way through some very thick enemy fire. We suspect that if this game wasn't quite as expensive as it is, it would have charted even higher.





Parodius Da!

■ **DEVELOPER:** Konami
■ **YEAR:** 1992 ■ **GENRE:** Shoot-'em-up

21 It's fair to say that Konami wasn't the most prolific of PC Engine developers. The company arrived on the scene in 1991 and released just nine games across both CD and HuCard. However, Konami was an exceptional developer at this point in time, and was a company that punched above its weight in the PC Engine market – *Parodius Da!* is the first of four of its games to make your top 25.

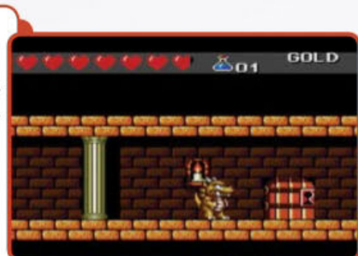
While the game is a less visually serious take on the company's shoot-'em-ups, most notably *Gradius*, the game itself is anything but a joke. As well as the usual tight stage design and impressive bosses you'd expect from Konami's shooters, the game offers four distinct ships with their own power-up paths. The cute and colourful visuals just help to distinguish it from its seemingly infinite space-based peers.

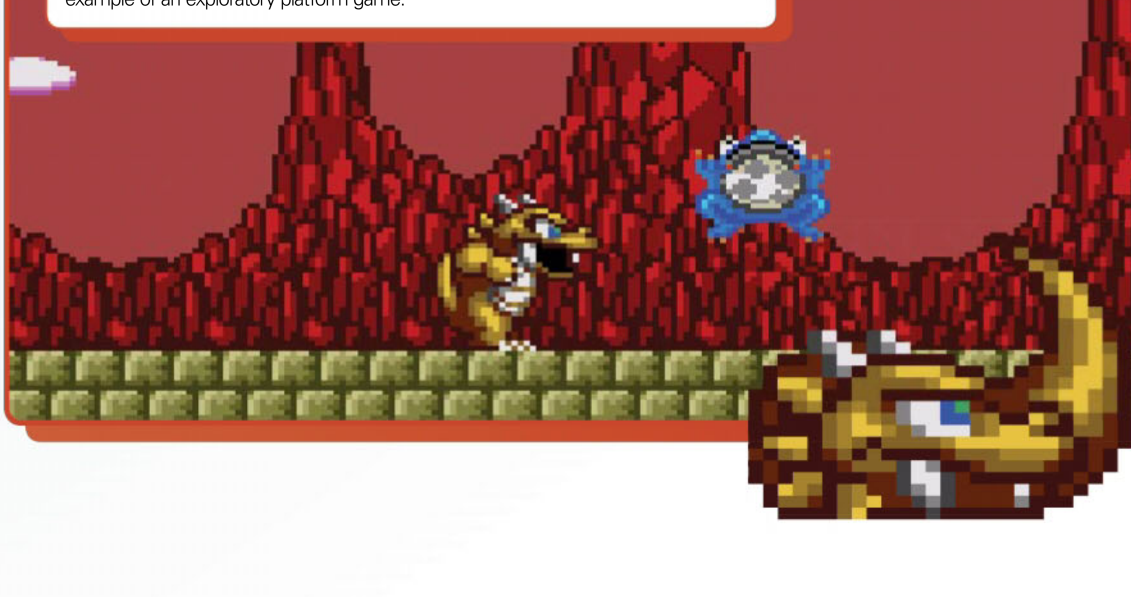
Dragon's Curse

■ **DEVELOPER:** Westone ■ **YEAR:** 1990 ■ **GENRE:** Platform

20 Master System fans will recognise this as *Wonder Boy III: The Dragon's Trap*, shorn of the name that Sega owns. Indeed, it's pretty much the same game – the music sounds a tad different, character sprites have had a little bit of a redesign and you will see the odd added bit of colour here and there, but that's, essentially, about it. For all intents and purposes, this is a Master System game on your PC Engine, so it's not the most technically impressive title on the system. Of course, the trade-off is that this was arguably the best Master System game of all time, so that's something.

For those of you who aren't familiar with this classic, let's recap: at the end of his last quest, our hero was cursed and transformed into a fire-breathing lizard. He needs to regain his human form, but that's only possible by venturing through a large platforming world, making use of the special abilities he picks up by transforming into other animals along the way. It's excellent, and rightfully deserves recognition alongside the likes of *Metroid* and *Castlevania: Symphony Of The Night* as a defining example of an exploratory platform game.





Vigilante

■ **DEVELOPER:** Irem
■ **YEAR:** 1989 ■ **GENRE:** Beat-'em-up

19 This rather excellent follow-up to *Kung Fu Master* was a clear demonstration of the sheer power that was jam-packed into NEC's tiny console – none of the other home versions could claim to be as close to replicating the arcade version than this.



Bomberman 93

■ **DEVELOPER:** Hudson Soft
■ **YEAR:** 1992 ■ **GENRE:** Maze

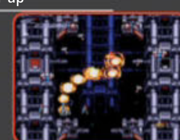
18 It's time for a pyrotechnics party, as the cutest demolitions expert in videogames enters your list. This sequel expanded on the *Bomberman* formula by adding hazards like conveyor belts and warps, and – as always – is best enjoyed with mates and a multitap.



Super Star Soldier

■ **DEVELOPER:** Hudson Soft / Kaneko
■ **YEAR:** 1990 ■ **GENRE:** Shoot-'em-up

17 The first game of the stellar *Star Soldier* series to hit the PC Engine was a massive hit, thanks to its highly impressive graphics and well-polished frantic shooting action, as well as the addictive timed challenge of the Caravan mode.



Salamander

■ **DEVELOPER:** Konami ■ **YEAR:** 1991
■ **GENRE:** Shoot-'em-up

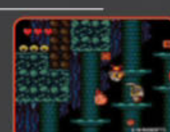
16 Konami's *Salamander* had have been around for five years by the time it reached the PC Engine, but that didn't at all diminish the quality of the game, nor Konami's excellent conversion work. Once again, most other home versions of the *Gradius* spin-off were put to shame by this excellent conversion.



Bonk's Revenge

■ **DEVELOPER:** Red Company ■ **YEAR:** 1990
■ **GENRE:** Platform

15 While he never achieved the same fame as the likes of Mario or Sonic, you could always bank on Bonk to provide excellent mascot platform action. You've plumped for the second game over the slightly basic first and rare, somewhat overblown third game.



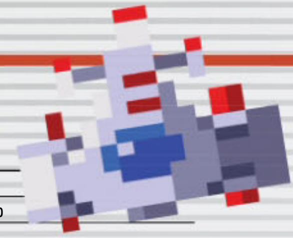


Out Run

■ **DEVELOPER:** NEC Avenue ■ **YEAR:** 1990 ■ **GENRE:** Racing

14 Now here's a remnant of a weird era, when Sega was both manufacturing its own hardware and licensing its arcade games to third parties for other consoles. The PC Engine received a number of Sega arcade conversions on such a basis, including the likes of *Space Harrier*, *Columns*, *Golden Axe* and, of course, *Out Run*. Never mind the fact that the game was a few years old by 1990 – this classic racer's appeal hadn't diminished, thanks to its characteristic branching roads and classic summer feel.

What's particularly impressive is that NEC's version managed to outdo Sega's own Mega Drive conversion, as it both looked and sounded closer to the arcade original. In fact, the PC Engine version remained arguably the best home conversion of *Out Run* until the arrival of the Saturn version in 1996. Not bad going at all!



Galaga 88

■ **DEVELOPER:** Namco
■ **YEAR:** 1988 ■ **GENRE:** Shoot-'em-up

13 It might seem funny that any game would be considered retro in the Eighties, but *Galaga* was definitely looking pretty simplistic towards the end of the decade. Luckily, Namco had the bright idea to spruce it up a bit and we ended up with this wonderful remastered shoot-'em-up.

The feel is decidedly more old school than in the many frantic blasters that populate the rest of this list, but that's an excellent change of pace – the single-screen formations are satisfying to clear. What's more, the game features all kinds of fun bonus features, from warps through scrolling stages to the amusing 'Galactic Dancing' interludes. Chalk up another excellent arcade conversion for the PC Engine, then, and another shoot-'em-up to boot. If you're looking for this in North America, it goes by the updated title *Galaga 90* instead, so keep an eye out for that!





Street Fighter II Champion Edition

■ **DEVELOPER:** Capcom ■ **YEAR:** 1993 ■ **GENRE:** Fighting

12 While the Turbografx was a dead duck in the USA by 1993, the PC Engine still had clout in Japan and managed to receive this excellent conversion of the fighting game that defined an era. Unusually, to allow for maximum sales and minimum loading time, the game was released on a 20 megabit HuCard instead of CD-ROM – that's two and a half times the size of the next biggest HuCard and the largest one ever released.

It was worth the extra expense, of course. Despite the fact that it was closing in on its sixth birthday, NEC's console pulled off the arcade classic admirably, packing in everything that made the game great – detailed backgrounds, larger than life characters and all of the special moves. Granted, the six-button pad was needed to get the proper experience, but it was well worth picking one up to play the best fighting game of its day.

One utterly amazing soundtrack that keeps me playing just to see what the next awesome track is
ALK

Gate Of Thunder

■ **DEVELOPER:** Hudson Soft/Red Company ■ **YEAR:** 1992 ■ **GENRE:** Shoot-'em-up

11 In the somewhat infamous Johnny Turbo adverts that accompanied the North American launch of the TurboDuo, the titular hero was introduced to us gushing over *Gate Of Thunder,* claiming, "it's got the arcade feel!" The first CD game to make your list is an absolute belter and certainly did rival arcade shoot-'em-ups – the opening stage in which you fly under a giant battleship is a spectacle that could easily have found a place in the coin-up world. To the delight of PC Engine CD owners everywhere it was an excellent exclusive instead. While the shooting is incredible, mention must be made of *Gate Of Thunder*'s soundtrack, from the shredding guitar to excellent electronic pieces.

If you're looking to pick up *Gate Of Thunder,* it's worth seeking out the compilation disc that was included with TurboDuo consoles in the US. Not only is it region-free, but it features *Bonk's Adventure*, *Bonk's Revenge* and *Bomberman* as added bonuses to sweeten the deal considerably.





Lords Of Thunder

■ **DEVELOPER:** Hudson Soft/Red Company ■ **YEAR:** 1993
■ **GENRE:** Shoot-'em-up

10 Has there ever been a better 'in name only' sequel than *Lords Of Thunder*? We're not sure there has. *Lords Of Thunder* (or *Winds Of Thunder* in Japan) boasts everything that its predecessor did, but approaches it in a different way. What that means is that you can still expect an awesome CD soundtrack full of shredding guitar tunes and high quality shoot-'em-up action. However, all those spaceships are yesterday's news – instead, it's a fantasy theme all the way in *Lords Of Thunder*. Graphically, the game is amongst the very best on the system. You'll see seemingly impossible parallax scrolling effects, a variety of diverse stages from gemstone caverns to sandy city outskirts, and huge multi-segmented enemies.

Of course, the changes go beyond the superficial. While *Gate Of Thunder* is practically an arcade game on the PC Engine, *Lords Of Thunder* is very much a console-oriented experience. Before you even blast your first enemy, you'll need to make a few choices. Which stage are you picking, which elemental armour are you packing? And most importantly, what are you buying from the shop? This forms a central component of the game, as most of the pick-ups you acquire during play are currency rather than anything immediately useful. As a result, it's much more possible to find an approach to the game that works for you, rather than just having to work with what you're given.

While it doesn't enjoy the same exclusive status as its predecessor due to a Mega-CD conversion, *Lords Of Thunder* is a game that ranks as an essential for PC Engine owners regardless. You can see why Turbo Technologies championed it in American adverts – not only is it a stunning showcase of what is possible on the hardware, it's a cracking game to boot. There's no need to choose between the original and the sequel here – if you love shoot-'em-ups, just pick up both games and enjoy.

Splatterhouse

■ **DEVELOPER:** Namco ■ **YEAR:** 1990 ■ **GENRE:** Beat-'em-up



9 Has any game ever made you feel quite as powerful as *Splatterhouse*? Pitting horrors against one beefy bloke and a big bit of wood should be the mismatch of the century, but as the satisfying impact of monster against wall proves, it's way more even than you'd expect. This beat-'em-up is not only an excellent arcade conversion, but a key reason to pick up the PC Engine as it didn't appear on any major competitors. Both the Japanese and North American versions are slightly edited compared to the arcade game, with the former retaining slightly more of the original material.



Gradius

■ **DEVELOPER:** Konami ■ **YEAR:** 1991 ■ **GENRE:** Shoot-'em-up

8 By the time Konami arrived on the PC Engine scene, its landmark shoot-'em-up, *Gradius,* might have seemed like an odd choice of game to make its debut with. After all, it had been knocking around for six years and it could be argued that it might have felt a step behind other shooters, especially in the competitive PC Engine market. Did that stop the company converting it? Did it heck!

The result was very worthwhile indeed. While *Gradius* wasn't the freshest game out there, it was and is an undisputed classic of the genre and offers a compelling challenge. What's more, the PC Engine conversion comes closer to the arcade original than most other versions, making it an essential purchase for fans of the genre.

The definitive home conversion for its time – almost indistinguishable from its arcade parent. Awesome.
CRUSTO





"Blazing Lazers just doesn't slow down when the screen fills with action"





Blazing Lazers

■ **DEVELOPER:** Hudson Soft/Compile
■ **YEAR:** 1989 ■ **GENRE:** Shoot-'em-up

7 If you experienced *Blazing Lazers* under its original Japanese title of *Gunhed,* then you might be privy to the game's great secret – it's one of the best licensed games out there! But even if you missed out on the film tie-in, it's an outstanding shoot-'em-up that played a big part in selling the system to overseas audiences. As well as lavish praise from American magazines, the game scored 96% in *CVG.*

Unlike most games of the era, *Blazing Lazers* just doesn't slow down when the screen fills with action, and boy is there a lot of action – the screen is filled with fire and sprites are shifted about at stupidly fast speeds. Plus, that lightning weapon is one of the coolest guns ever.

Soldier Blade

■ **DEVELOPER:** Hudson Soft
■ **YEAR:** 1992 ■ **GENRE:** Shoot-'em-up

6 As the third and last of the main *Star Soldier* series on PC Engine (we'll exclude *Star Parodier* for the time being), *Soldier Blade* had some big expectations to live up to. Thankfully, it didn't disappoint, delivering some speedy shooting action and memorable tunes all the way. The main wrinkle this time was with the weapon system – you could detonate your power-up pods at any time, trading off constant overall power for short bursts of special fire. This added a nice little element of risk and reward that kept the game feeling fresh. Be warned: an original copy of *Soldier Blade* will set you back a pretty penny, particularly if you want the American version!





Parasol Stars

■ **DEVELOPER:** Taito
■ **YEAR:** 1991 ■ **GENRE:** Platform

5 We'll never quite understand why Taito didn't bring *Parasol Stars* to more platforms, but PC Engine players could hardly care one way or the other – they got it first, and it was something of a treat. Changing up the gameplay once again, *Parasol Stars* is more *Bubble Bobble* than *Rainbow Islands*, with Bub and Bob tasked with eliminating enemies using their trusty umbrellas. You could choose to do that directly, or by catching special droplets which unleash elemental powers upon the bad guys. It's a simple platformer, but a cute and addictive one, too.

Ninja Spirit

■ **DEVELOPER:** Irem
■ **YEAR:** 1990 ■ **GENRE:** Beat-'em-up

4 Ninjas are excellent, and Irem's *Ninja Spirit* was one of a host of Eighties arcade games to capitalise on the fabled assassins. But while the game was good in coin-op form, it was truly great on the PC Engine thanks to an excellent conversion which not only replicated the arcade game superbly, but added a much more forgiving PC Engine mode.

There's something awesome about leaping around the game's stages while being followed by a trail of 'shadows' – when you've mastered attacking with your dark doppelgangers, you'll feel like an overlord of destruction. In fact, only the towering bosses top this spectacle, and the game sets out its stall on that front with a screen-filling enemy in the very first stage.





The game that started my love of this little machine. I saw it running in an import shop and it absolutely blew me away
ADIPPM82

R-Type

■ **DEVELOPER:** Irem ■ **YEAR:** 1988 ■ **GENRE:** Shoot-'em-up

3 This top 25 has shown that our readers love the PC Engine for its shoot-'em-ups and its arcade conversions – a fact that is unsurprising when you consider that the console's early flagship game was *R-Type*. When you first saw it running, you knew that the PC Engine was streets ahead of whatever you were playing it on at home.

In fact, rather than compromise on the visual quality to squeeze the game into a 2 megabit HuCard, upon its original release the game was split into two halves. If you're looking for *R-Type* now, it's best to seek out the American HuCard.

> **"Devil's Crush takes place on a long table with a wide variety of elements impossible to replicate on a pinball machine"**

Devil's Crush

■ **DEVELOPER:** Naxat Soft
■ **YEAR:** 1990 ■ **GENRE:** Pinball

2 If you haven't played *Devil's Crush*, you might be wondering how such an unconventional choice scored so highly with our readers. If you have played it – well, you probably voted for it. Naxat Soft had already scored an unexpected early hit on the PC Engine with *Alien Crush*, a pinball game in which you fought Giger-esque extraterrestrials, but the developer really managed to hit the jackpot with this occult-themed sequel.

Devil's Crush, much like its predecessor, takes place on a long table with a wide variety of elements that would be impossible to replicate on a physical pinball machine – moving enemies, separate bonus stages and more. As well as improving on some already great pinball physics, the game managed to rectify the one major flaw of *Alien Crush* by including a scrolling table, which provided even more action than that of its predecessor.



I'm not a big pinball fan but with how well designed the main table is, it just had me hooked from the first game
ARCHAICKOALA

Akumajou Dracula X: Chi No Rondo

■ **DEVELOPER:** Konami ■ **YEAR:** 1993 ■ **GENRE:** Platform

1 For outsiders, the PC Engine can be an intimidating machine. As well as seemingly endless hardware variants, each of which have their own particular quirks and capabilities, games came on five different types of hardware – regular HuCards, SuperGrafx HuCards, regular CD-ROMs, Super CD-ROMs and Arcade CD-ROMs. Of course, if you're in the UK, you'll need to be well-versed in running import hardware too. While there are resources out there, it can be a struggle to pick it all up and some might wonder why they should bother. Put simply, this is why – *Akumajou Dracula X: Chi No Rondo* (or *Castlevania: Rondo Of Blood* as we tend to refer to it in the West) is the game that for many of us made all of the effort worthwhile.

Richter Belmont's quest to rescue Annette and vanquish Dracula is a *Castlevania* game in the old style, with linear stages and temporary power-ups rather than the exploration and upgrading introduced by *Symphony Of The Night*. But this isn't just another *Castlevania* – this is the pinnacle of that style. In fact, we'd argue that it justified the entire shift – we wouldn't want to be tasked with trying to top it. Every stage is expertly designed, and one play won't be enough to see them all, as four are hidden alternatives to the regular stages. You can choose to play as Richter or as Maria Renard, a child vampire hunter who takes more damage than Richter, but is more agile and evasive to compensate.

Konami's programmers were peerless during the early Nineties, managing to exploit any piece of hardware they worked with to the fullest in order to produce the most visually impressive games possible. *Akumajou Dracula X: Chi No Rondo* is an absolute stunner, with beautiful backgrounds and some incredible set-pieces. Being chased by the Behemoth is terrifying, but that's far from the end of it – most boss fights are preceded by a short introduction that really ratchets up the dramatic tension of the moment. The music is similarly impressive. The composers took the unusual step of using both the on-board sound chip and CD audio, which means that you'll get some classic retro sounds alongside the awesome main stage themes.

In years past, this was a classic that you'd be forgiven for missing out on – after all, original copies are expensive and simply getting the right hardware to play it can be a minefield. However, Konami has since given the game a couple of re-releases, as part of the PSP's *Castlevania: The Dracula X Chronicles* and on the Wii's Virtual Console. Even if you don't own a PC Engine, you owe it to yourself to experience its best game.



Five Reasons Why It's Great

It's a masterpiece, with awesome boss introductions, detailed backgrounds and some superb sprites.

The level design is top-notch. Don't believe us? Try *Vampire's Kiss* – the level designs don't match up.

Speaking of levels, there are four hidden stages to discover, extending the game's life considerably.

The CD soundtrack is full of excellent tunes, amongst the best ever heard from the *Castlevania* series.

Where else can you play as a 12-year-old who beats up supernatural horrors with a variety of fluffy animals?



The whole package is so polished you have to wear dark glasses while playing *PAUL WELLER*

CLASSIC MOMENTS

Gran Turismo

» **PLATFORM:** PlayStation » **DEVELOPER:** Polyphony Digital » **RELEASED:** 1997

Is it possible to have too much power? When you first get hold of a fully-tuned Nissan Skyline GT-R V Spec, you might just think so. This is a car that practically protests at being forced below 60mph, and one that exceeds 200mph without issue on a decent straight. It's a capable machine, but one which demands respect and expertise from its driver at all times. Taking the wheel for the first time is a frightening situation – you'll find yourself fishtailing across the track and struggling not to spin out at corners. If you're keeping up with the pack at all, it's purely because of the unhinged speed and power of the machine.

But if you spend a little while in the Skyline you'll come to adjust your braking distances, compensate for the vehicle's heavy frame and stay on the track, bringing your lap times tumbling down. It still seems like you're a long way from fully taming the unstable beast, but you've managed to gain control over one of the best vehicles *Gran Turismo* has to offer. *



BIO

Not many games are in the works for five years, but *Gran Turismo* was worth every single day of labour. Having entered development two years before the PlayStation's launch, the game arrived in the final days of 1997 and redefined players' expectations of console racing games. Its packaging proudly declared it to be 'The Real Driving Simulator' and it was hard to argue, thanks to an impressive handling model, a 140 car roaster and stunning visuals. Universal critical acclaim followed, and a staggering 10.85 million copies were sold.



MORE CLASSIC GRAN TOURISMO MOMENTS

Passing Your Test



One of *Gran Turismo*'s quirks is the licence system, which requires you to participate in a series of racing challenges. These can be rather strict, with automatic failure for leaving the track. The A Licence is much harder to obtain than the faintly useless B Licence, but your opportunities to race are much greater once you manage to pass its tests.

From All Angles



When *Gran Turismo* launched, if you were able to watch one of its replays without being blown away, there was a good chance you were just dead. Visually, the game was peerless. The environments were incredible, every single one of the cars was modelled with care (and oh-so-shiny) and the dynamic camera angles gave the appearance of a televised race.

Petrolhead's Paradise



The range of cars and turning options in *Gran Turismo* was unprecedented for a console game, and it was something of a dream come true for the racing enthusiast. A dedicated player could find hours of satisfaction simply by buying cars and modifying them, in an attempt to extract the maximum performance from every single one of the game's 140 cars.

The Home Straight



You've narrowly held a lead for the last half of the final lap, but could have taken that last corner better. Now it's time to panic. As you near the finish line, beads of sweat form on your forehead, temptation overwhelms you and you hit the rear camera button. Your rival is close, but not quite close enough. You haven't screwed everything up, and victory is assured. *Phew.*

Future Classic

Modern games you'll still be playing in years to come



» **Featured System:** PC
» **Year:** 2010
» **Publisher:** Frictional Games
» **Developer:** Frictional Games
» **Key People:** Tomas Grip, Jens Nilsson (Designers), Mikael Hedberg (Writer), Mikko Tarmia (Composer)



GO DEEPER

» **Early working titles for the game included *Lux Tenebras* and *Unknown*.**

» **Part of the funding was provided by the Nordic Council initiative, Nordic Game Program.**



»[PC] Alongside the psychological approach to fear, there are also aspects of the supernatural at work.

51. AMNESIA: THE DARK DESCENT

Armed only with a lantern and the last of his wits, James Churchill risks his sanity creeping through the darkened catacombs of Castle Brennenburg to discover what made Frictional's horror masterpiece so good

THE BACKGROUND

Before *Amnesia: The Dark Descent*, Swedish developer Frictional Games were well versed in creating titles designed to terrify, having released the *Penumbra* series throughout 2007 and 2008. The first game in the series, *Penumbra: Overture*, provided an impressive first-person horror experience set in the arctic wastes of Greenland, with stealth, puzzle solving and melee combat as key gameplay elements. Soon after, the sequel, *Penumbra: Black Plague*, and its puzzle-focused expansion, *Penumbra: Requiem*, were released. As Frictional finished *Requiem*, the team sought to create a new horror-based adventure. In order to attract the interest of publishers, the game was originally envisioned as a casual torture-porn title with bite-sized play sections, complete with quests and collectables. But due to numerous setbacks including renegotiations with publishers and financial difficulties on several occasions (often threatening the closure of the studio entirely), Frictional decided to alter its overall vision for its new IP. The team's new focus was to distil the formula established by the *Penumbra* series. Although the new game would utilise a similar engine and control scheme to *Penumbra*, the team had a few new mechanics to add to the mix, as well as a vastly different setting.

THE GAME

Set in a cavernous Prussian castle in 1839, *Amnesia: The Dark Descent* places you in the shoes of Daniel, a man who has lost his memory and regains his awareness in Castle Brennenburg. Upon finding a note written to himself, Daniel is told he must kill the owner, one Alexander of Brennenberg, and escape a dark entity that is chasing him. It's up to you to venture into the deepest darkest catacombs of the castle and discover the pasts of Daniel and the mysterious Alexander through exploration and puzzle solving.

However, it's not meant to be a joyous experience. *Amnesia* is a horror game of the highest order, and one that is brilliantly constructed. Like a grotesque creature waiting for its prey, *Amnesia* takes its time with you, savouring in your fear, and there are numerous ways in which the game does this. Castle Brennenburg is

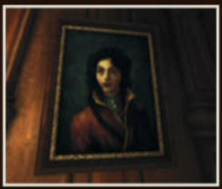
Things of note

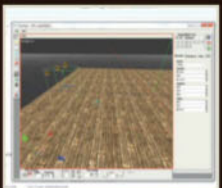
TOTAL RECALL

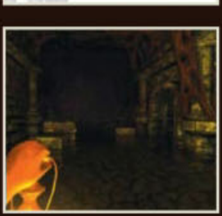
In key areas scenes trigger in which Daniel hears the voices and sounds of the past. They help uncover the mysteries behind Castle Brennenburg and its inhabitants.

THE NEW FLESH

As you progress through the game, masses of pulsating flesh invade completed areas. Like many things in *Amnesia*, it has its own explanation further on in the story.

JUSTINE

This free add-on presents a fantastic experience where you progress through torturous puzzles set up by the titular Justine. Beware, for all is not as it seems.

MODS OF DOOM

It's possible to download the game's mod tools from Frictional Games and create your own stories, allowing for a large amount of customisation.

THE CELLAR TUNNELS

The cellar provides one of the most tense moments as you have to traverse flooded rooms whilst being chased by an unseen menace.


»[PC] You would frequently come across corpses,some more grotesque than others.

> "Throughout the game Amnesia lays its sonic atmosphere on thick"

a lonesome and gloomy place. From the large stone chambers to the dingy cellar tunnels, it manages to be isolating and expansive whilst claustrophobic. There are light sources in the form of an oil lantern and tinderboxes, but these need to be used sparingly in order to last.

Throughout the game *Amnesia* lays its sonic atmosphere on thick. From every gush of wind and distant roar to ambient compositions, the soundtrack brilliantly captures moments of intense fear, phantasm and occasional relief. And whilst the castle is sparsely populated, you are most certainly not alone. When you encounter enemies, there's not much you can do besides running, hiding or sneaking through the dark as they are tough and hell-bent on destroying you. If you are seen, you will be chased down. And if you are trapped, you will be killed quickly. This only helps enforce the realisation that you are helpless.

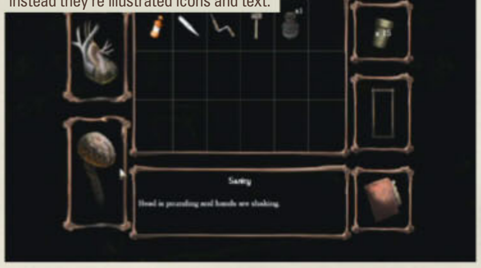
But what brings *Amnesia* into the realms of brilliance is the implementation of the game's sanity meter. Whilst games like *Eternal Darkness: Sanity's Requiem* and *Call Of Cthulu: Dark Corners Of The Earth* have utilised the idea previously, *Amnesia* still has tricks up its sleeve by tying sanity effects into the other aspects of the game. For starters, Daniel's case of nyctophobia means that too much time spent in the dark will decrease his sanity levels. But when sneaking past or escaping enemies, light can also be your worst nightmare.

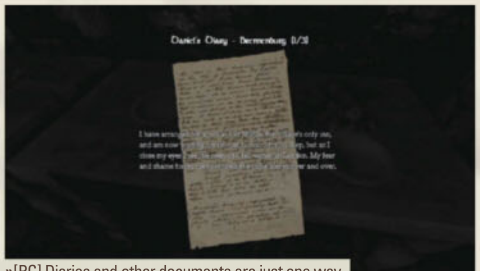
And when you to start to lose your sanity, the scenario becomes more disturbing. Whilst the visual and auditory hallucinations are unsettling, they also add to the experience of paranoia as you start to doubt your own judgement. Was that mysterious noise you heard an enemy lurking in the darkness? An environmental sound? Or just the game trying to mess with your mind? This constant self-questioning whilst trying to solve puzzles, navigate the castle amount to one of the greatest horror experiences to be had.

WHY IT'S A FUTURE CLASSIC

With *Amnesia*, Frictional coalesced the best aspects of the *Penumbra* series into a slick machine, improving every aspect of their previous efforts and polishing the game into a expertly paced trouser-spoiling fest. It was the first of the big independent horror titles to nail a first-person approach and popularised the focus of playing an unarmed protagonist where running and stealth are key. In doing so, it led the charge for a new wave of horror releases, proving that you don't need a gigantic budget to create a memorable and frightening experience. But most importantly, it reminded creators the world over that the fundamentals of design and understanding of player psychology are always the most important aspects of the genre, and the medium itself. Not bad for a core team of five people. *

»[PC] The masterful approach to sound design was inspired by the 1963 horror film, *The Haunting*.

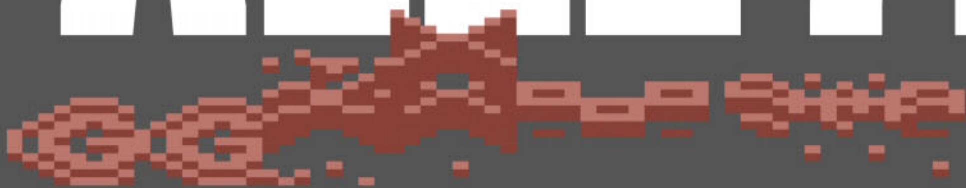

»[PC] Your sanity and health don't have traditional meters instead they're illustrated icons and text.


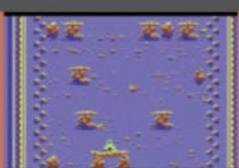

»[PC] Diaries and other documents are just one way in which the narrative gradually pieces together.

»[PC] The mouse controls allow you to mimic real-life actions and manipulate physics.


An unlikely hybrid of racing game and scrolling shooter, Alleykat was Andrew Braybrook's technically stunning sequel to Uridium. Mike Bevan looks behind the starting grid with its talented developer

ALLEYKAT





ALLEYKAT 101

■ *Alleykat* is a unique mixture of futuristic racing and shoot-'em-up action. Players fly a transforming craft across obstacle-strewn courses blasting hazards and robotic enemies, trying to survive long enough to complete the required number of laps. The goal is to win enough prize money to enter the season's final race and become Alleykat Champion…

It's 1986 and programmer Andrew Braybrook is riding a wave of popular support buoyed by two high-profile games for the Commodore 64, the *Zzap!* Gold Medal-winning *Paradroid*, and the space-themed shooter, *Uridium*. Just one year after his first original C64 title, *Gribbly's Day Out*, Andrew has become one of the most acclaimed and recognisable talents programming on Commodore's machine. With *Uridium* he will soon be the recipient of two prestigious Golden Joystick awards, receiving a prize for Arcade-style Game Of The Year, and becoming the first C64 coder to take the title of Programmer Of The Year. Unsurprisingly, expectations are sky high for his next offering, *Alleykat*.

Given this background, we want to find out if he was at all anxious about equalling his previous projects, and matching the silky-smooth arcade feel of his smash-hit shoot-'em-up. "I didn't feel too much pressure as I had different presentation ideas from one game to the next," Andrew muses. "I just got on with coding…"

"As *Uridium* was doing well, it gave me confidence, and I was keen to push the boundaries of what I could do on the C64. I wanted to scroll the whole screen, have shadows on all the objects and have less linear gameplay so the player could choose their route through the game. As I wanted to do something different again, I picked a scrolling racing game."

In *Alleykat*, players take the role of an inter-planetary racer negotiating a series of courses built around the rims of orbiting space-stations. It's a sort of cross between Formula One and the setting for *Halo*, with grandiose names for each event like Superspin Chase, Astro Classic and Zero-G Hurdle. The Alleykat season comprises of 32 courses packed with obstacles and hazardous opponents, each requiring a certain number of laps to conquer. The goal of the game is to complete enough races and accumulate the prize money to enter the legendary Alleykat Final, the ultimate galactic racing challenge.

With its unusual isometric viewpoint and eye-catching



» [C64] Crossing the finish line at high speed to go around again for another lap.



» [C64] Andrew apologises for making you fly through this giant skull at the beginning of the final race…

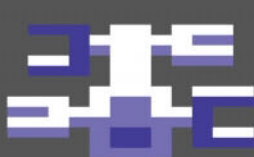
GRAVO CRAFT

The enemies of Alleykat



FIN-PULLER 100 POINTS

FOURK 100 POINTS





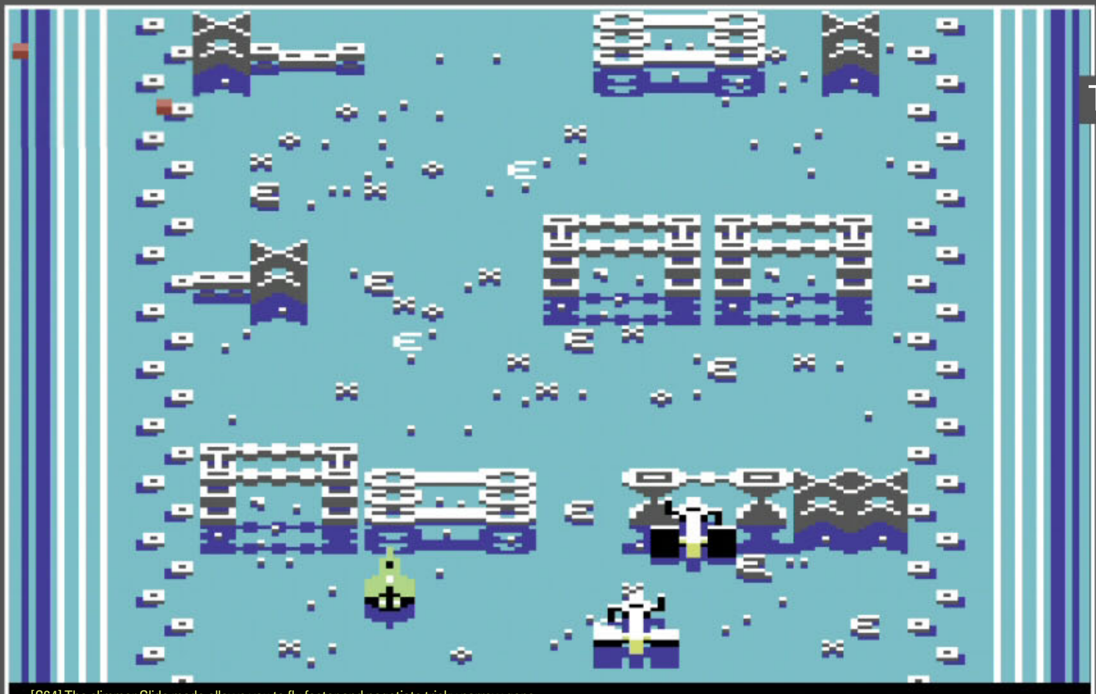
BARROW-PADDLER 200 POINTS

DUO-PADDLER 250 POINTS





NUTS 250 POINTS



» [C64] The slimmer Glide mode allows you to fly faster and negotiate tricky narrow gaps…

shadowed backdrops, *Alleykat* looks quite different from the scrolling metallic super-dreadnoughts of *Uridium*. One of the inspirations for *Alleykat*'s visual style was a game by Activision that started life on Atari's 8-bit home computers. "I had just bought an Atari 600XL and got a few games with it. *Pastfinder* was one of them," Andrew recalls. "I played a lot, and I hadn't seen anything like it. I liked its look and that it gave a different viewpoint. The idea of the main character sprite passing over and under parts of the background was interesting. [On the C64] the multi-colour mode supported two colours for solid objects, a background colour and a shadow colour. This meant seeing only two faces of the solid objects but giving them shadows to produce a solid look."

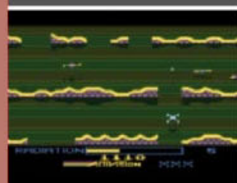
Like *Pastfinder*, Andrew's game granted players the firepower to destroy the pesky drone craft. Additionally it allowed you to take out most of the scenery on many courses, a feature particularly useful in the Demolition Derby events. "I was thinking about what sort of things could be done with a fast vertically scrolling screen and destructible backgrounds, and realised that I was short of sprites, so instead of racing other vehicles that could be anywhere on the race track, I had to keep objects feeding through the main visible area to disrupt what the player was trying to do, without [making the game] too difficult. So it's only a sort-of race game, more of a challenge, like an assault course."

> **"I was keen to push the boundaries of what I could do on the C64"**
> Andrew Braybrook

Andrew also looked to some of his past projects for inspiration, along with several coin-op titles. "There are elements of *Uridium* in there with the control mode," he explains. "The backward loops are an extension of *Uridium*'s half loop and roll out. They afforded a brief moment of protection, something the arcade games *1942* and *1943* also did. There's a bit of *Space Harrier* in there too that inspired the Katerkillers, and the game owes the less-rigid routes through the levels and the energy system to *Gribbly's Day Out*." Like *Uridium*, Andrew packed a surprising amount of control features onto the C64's one-button joystick, with the ability to pull the aforementioned loops, dive, climb, accelerate and decelerate your craft, and even transform between two modes of flight. Players could switch in-game between a heavily armed ship with wing-mounted cannons and the sleeker, more agile 'Glide' mode, useful for nipping through narrow gaps in the scenery. Curiously, the inspiration behind this



» Publisher Hewson's box cover-art for the European release.



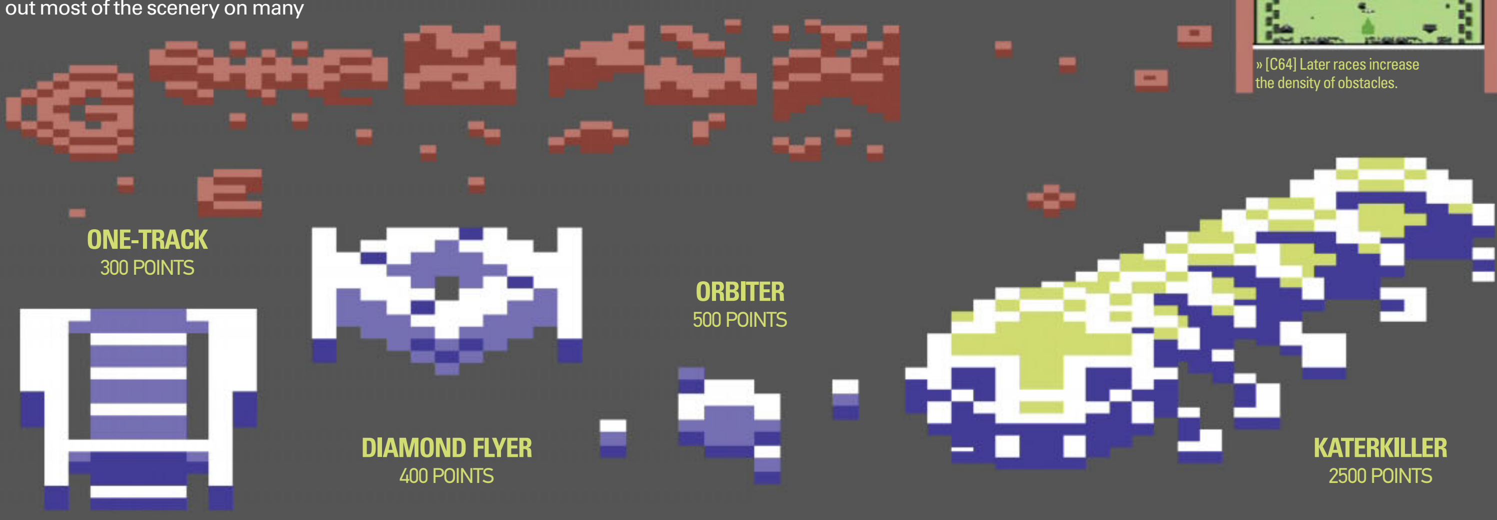
» [Atari 8-bit] *Pastfinder* was one of the influences for *Alleykat*'s visuals.



» [C64] Early races, like this 'shatter-rock' course, are much simpler.



» [C64] Later races increase the density of obstacles.







IN THE KNOW

- » **PUBLISHER:** Hewson Consultants
- » **DEVELOPER:** Graftgold
- » **RELEASED:** 1986
- » **PLATFORM:** Commodore 64
- » **PLATFORM:** Racer / Shoot-'em-up

» [C64] Pulling *Uridium*-style loops can help keep you out of trouble.

neat little touch appears to have come from a certain Stringfellow Hawke…

"I'd probably been watching a lot of *Airwolf* on TV and noted that they didn't keep the guns out all the time for aerodynamic reasons, so I had a speed-limited guns mode and a faster mode without the side guns," Andrew reveals. "The game also spends time pulling the guns in to perform the loop, as I didn't want to deal with bullets going up in the air or backwards. If the guns were out it redeployed them when the loop was done. The control mode is one of the things that takes the longest to get right. I needed three-dimensional movement from a 2D stick and one button for firing. It worked pretty well and I was quite pleased with it."

Andrew developed a clever algorithm which meant that races never played out quite the same, meaning players couldn't simply learn the map layouts to prevail. "The tracks were created partially randomly," he reveals. "I set the variation in distances between rows of graphics, for example the fences, and also set the possibility of clear space versus blockages. I had whole and destroyed versions of the background pieces to update the map as the game progressed. The chance of any background being destroyed by a bullet was also controlled, from one shot taking it out every time all the way to the indestructible skulls of the last race. The construction of the tracks allowed me to have more space for eight graphic styles."



» [C64] Slalom races award extra points for flying between and under obstacles.

Indeed, *Alleykat* players could expect to come up against a variety of environments from jungles and courses strewn with flimsy 'shatter-rock' to monolithic 'hardwall' levels and the ultra-nasty Skulnia challenges. There was also a welcome amount of freedom in the events that you could enter en-route to becoming Alleykat champion. "It didn't seem necessary to do all 32 levels every season, so I just gave the player more choices the better they did," says Andrew. "You earn more prize money and you can enter more races. The season stops not when you crash, but when you can't afford any more races, so I got rid of the concept of 'lives'. You can also strengthen your ship against attacks by collecting the energy blocks on the ground, increasing your capacity for the next race, so you can take more damage."



One key strategy in *Alleykat* was to try and take out as many of the dangerous obstacles as possible in early laps before switching to glide mode to finish with a fast time. "The changing track as the race goes on was important," Andrew agrees. "Also collecting too many energy pickups wastes them, so you have to think about the later laps too. The other vehicles in the game can knock down scenery for you so it isn't always the best plan to just take them out quickly. I reckon that I should have battle-scarred the landscape where vehicles were destroyed, not just the main player. With lots more sprites I'd leave smoke and fires and do explosions and debris flying everywhere. I liked the fact that for the last race you have to go through the mouth of the skull at the start, and continue to negotiate the background carefully. The algorithm always left a way through and the other vehicles started knocking the pieces down to help you."



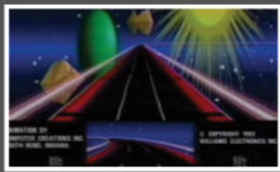
» [C64] Entering Gun mode gives you greater firepower to blast obstacles and dispatch the vicious Katerkiller.



SPACEY RACERS

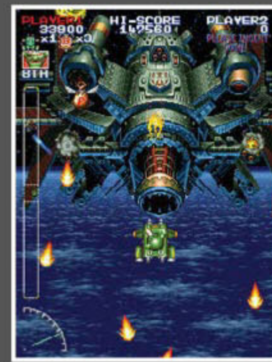
Five more off-world racing games











SPACE RACE

■ This was Atari's second coin-op after *Pong*, and took the form of a sort of interstellar drag-race. Two players competed in heading up the screen in rockets, trying to avoid contact with hordes of dot-like 'meteors'.

STAR RIDER

■ This rare laser-disc coin-op was developed by Williams Electronics and *Joust* creator John Newcomer. It featured spectacular pre-rendered courses, over which animated futuristic motorcycles were superimposed.

TRAILBLAZER

■ Starting life on the C16, Shaun Southern's two-player racer took place on a colourful chequer-like playfield. It's sequel, *Cosmic Causeway*, introduced obstacles and *Space Harrier*-like bosses.

GALAXY 5000

■ Released for the NES, *Galaxy 5000* was a light-hearted isometric racer with overtones of *Marble Madness*. One or two players could compete in a field of four ships with limited firepower to knock out opponents.

KINGDOM GRAND PRIX

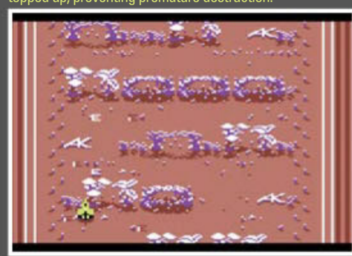
■ Released on the Sega Saturn in Japan, Raizing's unique shooter is the only other game we know that feels similar to *Alleykat*. Only here you race competitors and battle giant bosses while trying to maintain your speed.

Alleykat features some of the fastest scrolling ever seen in a C64 game, particularly when going full speed in Glide mode. "The scrolling is running at the full 50fps, and 60 on the US version," says Andrew. "The top scroll speed in the game was eight pixels-per-frame so it was rebuilding 900 characters every frame. As the race completes it scrolls even faster, just because it can!" Andrew reveals how he put a lot of time into *Alleykat*'s sprite animation, particularly the ship, its crash animation, and the scary Katerkiller, with which collision meant instant death. "The sprites took a while because I wanted wacky designs and smooth animation. The large number of frames for the vehicles and player did leave me with less different objects, but animation gave life to them, so it was worth it. There was no sprite multiplexing; the bullets were all done with character graphics. Having a 'shadow' sprite for each vehicle meant I had four objects from eight sprites, and as I was using the full screen as a play area it left bare spaces at times."

"The Katerkiller used all six remaining sprites, at the expense of not having shadows," continues Andrew. "I really notice that. It wasn't until I met up with other programmers at *Zzap 64!* Towers after the game was finished that we discussed multiplexing the sprites, which I used in *Morpheus* and *Intensity*. Each game took me longer and longer to do… *Alleykat* took six months." The game's name also caused trouble in the USA due to similar sounding title by Synapse Software. "We got told that the US publisher didn't like the name and wanted to change it, we were never told why. It was lamely called *Demolition Mission* over there."



» [C64] On the harder race events a good strategy is to let the Gravo drones knock down the scenery for you.



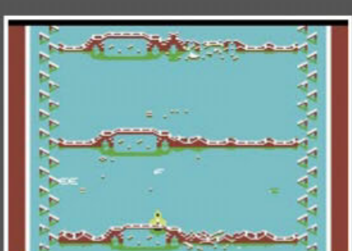
» [C64] Collecting the 'E' letters keeps your energy topped up, preventing premature destruction.

> **"I just gave the player more choices the better they did"**
> Andrew Braybrook

Despite is technical wizardry, *Alleykat* arrived to a slightly more muted reception at C64 review magazine *Zzap!64* than Andrew's previous games. We wonder if Andrew was at all perturbed by reviewer Gary Penn's admission to being disappointed with the game, despite the gushing praise from fellow staff member Jaz Rignall. "It's more to do with whether your new game matches up to someone's expectations, which are your previous game plus 50 per cent at least," he admits. "That becomes unachievable however hard you work. I always tried to do something different to avoid direct comparisons, but it happens. The *Zzap!64* review team certainly polarised. We got sales notifications and royalties every month, but I don't remember us ever adding up the total sales per title. It's likely that *Uridium* did better."



But overall Andrew still seems to regard *Alleykat* as one of his finer moments on the C64, and it's a game that we'd urge those who like the sound of it to try at least once. "I liked the crash effect for the main ship, it sat well with my 'make a big entrance and a bigger exit' philosophy," he chuckles. "I was happy with most of it, just disappointed that people could progress by just flying fast up the side of the track and firing a lot. The speed of the scrolling made it difficult to control realistic attacks on the player." Then with a twinkle in his eye Andrew delivers one last thought: "No-one attempted to write this on the Spectrum, though, did they?"



» [C64] It might look quiet at the moment, but carnage is just around the corner…



» Andrew Braybrook is widely regarded as one of the C64's most talented coders.



DEVELOPER HIGHLIGHTS

GRIBBLY'S DAY OUT
SYSTEM: Commodore 64
YEAR: 1985

PARADROID (PICTURED)
SYSTEM: Commodore 64
YEAR: 1985

URIDIUM
SYSTEM: Commodore 64
YEAR: 1986

Hardware Heaven

Sega Saturn

» **MANUFACTURER:** SEGA » **YEAR:** November 1994 » **COST:** £399 (UK launch), £15+ (UK today - unboxed), £30+ (UK today - boxed)

Sega had the pick of the pack when following up the Mega Drive – the company was offered both the 3DO technology and the Silicon Graphics Inc. architecture that powered the Nintendo 64, as well as the chance to collaborate with Sony. Instead the company went down its own path, placing its faith in its own hardware engineers. The result was the Saturn, a complex piece of hardware featuring two processors, two video chips and a custom sound chip. While this unusual arrangement delivered a high level of theoretical performance, it came with real downsides as the hardware was expensive, and programmers struggled to grasp its idiosyncracies.

Despite some excellent games, the Saturn's drawbacks kept it from repeating the success of its predecessor on the international stage. However, it became a popular machine in Japan and gained a hardcore following amongst import gamers as a result, becoming well-known for its excellent conversions of 2D arcade games, particularly shoot-'em-ups and fighting games, as well as original RPGs. So while the Saturn wasn't the success that Sega had hoped for, it did find an audience that appreciated its strengths – and the lessons it taught would prove invaluable in designing the Dreamcast. *





Hardware fact

■ The Saturn was the only console of its generation to come with built-in memory for saving games. However, it depends on a CR2032 battery, so it's worth getting a memory cartridge anyway.



RAM:	2MB MAIN, 1MB VIDEO, 512KB AUDIO
PROCESSOR:	DUAL HITACHI SH2 (28.6MHZ EACH)
OPERATING SYSTEM:	SEGA SATURN BIOS
FORMAT:	CD-ROM
TOTAL SOLD:	9.5 MILLION

ESSENTIAL GAME NiGHTS Into Dreams



As an original 3D game, *NiGHTS* might not appear to embody the things that endear the Saturn to its fans. However, look beneath the surface of Sonic Team's first venture away from its mascot and you'll see Sega's arcade design at work, as *NiGHTS* is a hardcore score attack game at heart. What's more, Sonic Team gave the Saturn hardware an excellent workout. Each stage mixes 2D sprites and polygonal objects to great effect, and amazing graphical effects such as reflections and real-time environment warping put other games shame.



New Generation Software

Buoyed by the success of 3D Monster Maze, creator Malcolm Evans decided to start his own software house. Graeme Mason visited the idyllic outskirts of Bath to chat to the legendary coder about what happened next

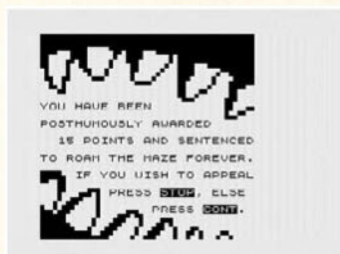
Despite being only in his mid-thirties, Malcolm Evans had a sobering conversation with the careers advisory service in 1981. "They said that software was a young man's game and that I'd be out of my depth," he smiles. We're sitting opposite the legendary coder on the patio of his cottage. It's the perfect location to chat about the history of one of the foremost software houses of the early 8-bit years.

Malcolm had been working mainly with hardware development, culminating in the Sperry Gyroscope project; but when this closed down, he required a new line of work. After his wife purchased him a ZX81 for his birthday, he became fascinated by the technology and began exploring what he could create using the computer. He explains, "I tested what I could do and created this algorithm for generating a maze and had the task of putting a monster in it." The idea for the monster had come from John Greye, a programmer that Malcolm had met locally. "I showed him the maze and he said, 'why don't you put a monster in it and make it a game?'" At this point Malcolm recounts a tale of when he tested *3D Monster Maze* late one night. "I was working on it and checking some routines when the monster suddenly appeared. I jumped out of my skin and let out a yelp, scaring my wife who was asleep! That's when I knew this could be something and put this caption at the start about only entering if you dare."



» Rod Evans presents Peter Green of *Computing Today* with champagne and details of a weekend in Paris that the lucky chap won.

Malcolm and John Greye agreed to go into business together under John's company name of J.K. Greye Software. "John had a spare bedroom," remembers Malcolm, "my wife and I would go there in the mornings and post games. Then John would look after the office in the afternoon while I coded. I think he spent most mornings asleep. I didn't know a lot about him other than he was a lot younger than me."



» [ZX81] A grisly demise for any that fail to escape the T-rex in *3D Monster Maze*.

J.K. Greye Software had already published three BASIC games for the ZX81, but it was Malcolm's *3D Monster Maze* that proved to be its big title. Although most of the sales were by mail, Malcolm secured a deal with WHSmith. "When I came back, John wasn't happy that I'd given a discount. But you had to with bulk sales!" The retailer's chief software buyer, John Rowland, was suitably impressed, especially when Malcolm followed up with the 1k game, *Breakout*. "But he said the trouble was we couldn't sell it at £4.95, and I said I was thinking cheaper, under £2." Upon returning to Bath, John was, again, unhappy, despite the fact he had secured a ▶



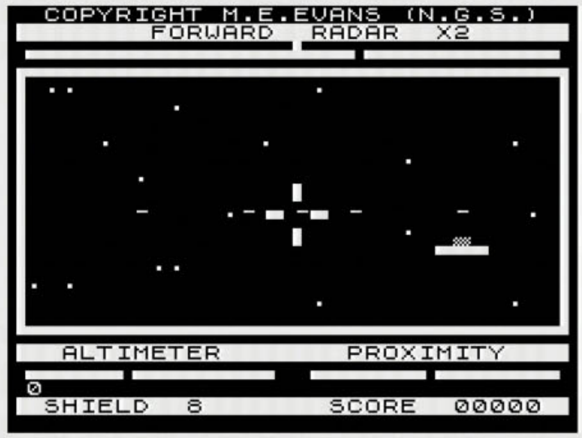


» New Generation wasted little time in releasing *3D Monster Maze* on the ZX81.

IN THE KNOW

- The company name New Generation came from a phrase Malcolm Evans used on a J.K. Greye Software advert.
- The early New Generation logo featured a pair of dinosaurs in a nod to *3D Monster Maze* and *Escape*.
- The art for New Generation's early games was created by a local artist named Rob Pengilley.
- In 1983, New Generation became a founder member of The Guild Of Software Houses (or GOSH). Other members included Quicksilva, Virgin Games, Bug-Byte and Salamander.
- According to Malcolm, the rather similar Guild Of Distributors Of Software quite liked its acronym of GODS. We can't imagine why.
- New Generation also entered into a partnership with Quicksilva in 1983 to distribute its games overseas.
- Malcolm's Machine Code Tutor utility was very successful. The Amstrad version took him just 48 hours to code.
- It also fell afoul of trading standards when someone reported the utility for teaching 'assembler' instead of 'machine code'. Some quick checks by Standards officers made them realise they were generally accepted to mean the same thing.
- The third-party game *Amazon Warrior* caused some embarrassment when Malcolm and Rod failed to realise it was a blatant clone of the C64 hit *Forbidden Forest*.
- The New Generation kitchen designer Laptop sold a grand total of 34 units.





» [ZX81] *3D Defender* was a very impressive game considering the technology.

TIMELINE

1981 Malcolm Evans meets John Greye and they join forces to create ZX81 games.

1982 With Malcolm unhappy with the arrangement with J.K. Greye, he decides to create his own software house, named after an advertising slogan. New Generation re-releases his ZX81 classics and its first Spectrum game, *Escape*.

1983 A busy year for Malcolm as New Generation moves to new premises and he creates three games for the ZX Spectrum, including *Corridors Of Genon*. Malcolm's twin brother, Rod, comes on board to help with the day-to-day running of the business. Later in the year, they are joined by Paul Bunn and James Day.

1984 *Trashman* is the outstanding hit in 1984 with its sequel following a few months later. James Day and Paul Bunn contribute *Cliff Hanger* and *Shoot The Rapids* respectively to the Commodore 64.

1985 The cracks begin to appear as Malcolm and Rod realise that the industry is changing rapidly and greater investment is needed to survive. They decide to quit ahead of the game and the rights to all of New Generation's games are sold to Virgin.

1989 After a brief dalliance with hardware and a bespoke portable computer designed to help create virtual kitchens, New Generation finally ceases trading.

▶ 10,000 unit sale with a profit of £1 on each unit sold. "Someone said to me afterwards that I'd created the budget industry," says Malcolm, "we eventually sold 22,000 copies of *Breakout* on the ZX81."

Cracks were starting to appear in the relationship between Malcolm and John. With the latter planning a vacation, Malcolm turned his eye to John's promotional efforts. "He was supposed to be doing marketing," says Malcolm, "and had produced this advert. I added a couple of things including the phrase 'the new generation of software' as a subtitle." After the two men decided to go their separate ways, Malcolm asked if he could use the name New Generation Software to which John agreed. New Generation began as just Malcolm and his wife; soon after Malcolm's twin brother, Rod, came aboard to take care of the admin side of the business.

After a re-release of *3D Monster Maze*, Malcolm set about working on games for Sinclair's follow-up to the ZX81. "John and I had received advance models of the Spectrum so I'd already worked on it a fair bit," he recalls. The first game was



» [ZX81] Malcolm's nocturnal experience with *3D Monster Maze* led him to put in a warning for the faint of heart.

another dinosaur-themed maze game, albeit different graphically. "I was just trying to see what the Spectrum could do. I soon found the problem was you couldn't draw anything too big. One of the advantages of the ZX81 was that the screen was indirectly addressed so you could create a picture then switch it." *Escape* was Malcolm's attempt to re-create the thrills and tension of *3D Monster Maze* and once written, it was time to market the new game. "One of the things John was complaining about was that we never got much promotion in the magazines," says Malcolm. "When I started PR on *Escape* I discovered why – I was told by nearly all the magazines that they only made phone calls in the afternoons, presumably because it was cheaper. As a result they could never get hold of us as John was rarely about..." When it came to selling *Escape*, Malcolm once more approached WHSmith' John Rowland, who offered to take a mere 1,000 copies. "I was a bit disappointed as all the others had done 10,000," says Malcolm. "But then when I got home I had a phone call from John who said his colleagues were impressed and could we make it 2,000. Then, the week before I was going to get it duplicated, they called again to say could we make it 5,000! And finally, as I was about to leave for the duplicators, he called again and asked for 10,000."



» Machine Code Tutor didn't take Malcolm very long to knock up and was a decent seller.

We take a break for coffee and cake. The location is a mix of nature and man; behind us a gentle stream encourages the arrival of local birds that tweet incessantly. To our right is the main road which is used much more extensively than when Malcolm bought the property eight years ago. On that subject, we ask him about New Generation's first offices. "We moved to a house in Bath which had a coach house and stables. We renovated it and used the upper floor as offices," explains Malcolm. With Rod keen to expand, he suggested hiring more programmers. After advertising locally, two coders were recruited, 19-year-old James Day and 16-year-old Paul Bunn. Malcolm explains: "They were hired to produce cheaper games, and also games on other formats. Paul had an Atari rather than a Spectrum and we needed to produce C64 games as well."





» Two contrasting pictures of Malcolm hard at work and taking a break to acknowledge the camera.

DIRTY ROTTEN SCOUNDRELS

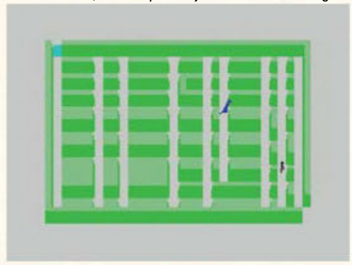
Malcolm on handling pirates

Like most software houses of the Eighties, New Generation struggled to combat piracy, most notably the professional pirates who would make copies to sell tapes commercially, rather than the more notorious 'evil' of home taping. "We were at a micro show and this guy came up to our stand and spoke to Rod," remembers Malcolm. "He admitted he was a reformed pirate and boasted that he'd sold 30,000 copies of *Trashman*!" After a brief conversation with Malcolm's twin, the so-called reformed character cheekily requested a copy of *Trashman's* follow up, *Travel With Trashman*. "He was literally kicked off our stage," grins Malcolm, "but we'd seen the copies, and you could tell because the colours were always slightly off. They'd apparently come from one of the big distributors as well, and no I'm not telling you which one!"

Like many pioneers of the 8-bit industry, Malcolm learned the various processes and parts of software publication on the fly. By the time he had begun New Generation, he had already established many key parts such as tape duplication. "We were doing it by hand at J.K. Greye and it took hours, copying the tapes and putting the labels on," he winces. "And as soon as we went to WHSmith they wanted a sample of 50 copies. I remember, they asked where we'd had them duplicated. When I told them it was all done by hand, they said 'no wonder they were so good!'" Throughout 1983, Malcolm continued to program, creating several impressive games for the ZX Spectrum. But thanks to duplication, advertising and business costs, the improved sales merely meant profits held at a steady, rather than spectacular level.

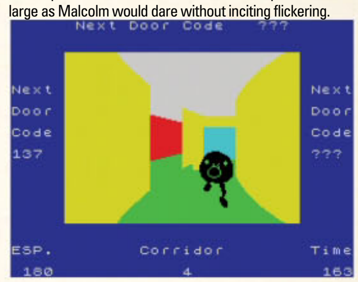
> **"The advantage [of Knot In 3D] was that the pixels on the screen could be the same all the time, all you had to do was change the colour"**
> Malcolm Evans

» [ZX Spectrum] It may not have had the wow factor of *3D Monster Maze*, but *Escape* was just as nerve-wracking.



The change to the Spectrum didn't deter Malcolm from his 3D theme; *Knot In 3D* was not only a cunning title, but also a neat first-person game that owed more than a little to the movie *Tron*, specifically its famous light cycle sequences. "The advantage [of *Knot In 3D*] was that the pixels on the screen could be the same all the time, all you had to do was change the colour. I was experimenting, trying to see how big I could get things." *3D Tunnel* was an impressive game that gained effusive reviews, although its duplication proved troublesome. As was common at the time, the game had 16k and 48k versions, one each side of the tape. "Our duplicators got it wrong and put the 48k version on both sides and we had to return the lot," laments Malcolm. WHSmith began ordering less after this incident, but Rod insisted this was a coincidence as the rise of the software distributors was beginning, ending retailers such as Smiths dealing directly with software houses. In any case, New Generation's most successful game was around the corner.

» [ZX Spectrum] *Corridors Of Genon*'s main sprite was as large as Malcolm would dare without inciting flickering.

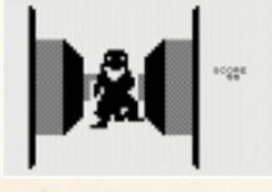


"Our marketing guy came for a meeting with Rod," explains Malcolm, "and as he came out he asked me what I was writing at the moment, passing some comment about kids these days and all they wanted was rubbish." Malcolm's immediate thought was a compilation of toilet humour games along the lines of Automata's *Can Of Worms*. "But I thought, no you can't do that in 3D. Then I considered a game set in space, clearing rubbish, but I couldn't get that to work." Finally he settled on a somewhat more mundane level of rubbish clearing, that of the hard-working and humble dustman, and the game was a critical and commercial hit. "*Trashman* did really well," smiles Malcolm, "which was vital for a small software house like us. It basically gave us the financial boost to carry on for another six months." But despite this success, Malcolm could see the way the business operated shifting – and not for the better for smaller companies such as New Generation. "I was standing back from the commercial side, but one of the things that ▶

DEFINING GAMES

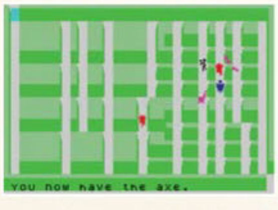
3D Monster Maze 1982

Almost universally lauded as one of the finest games on the early Sinclair computer, New Generation's first wave of releases included Malcolm Evans' ZX81 classic, sporting a brand new cover. The premise was simple: the computer generated a random maze which contained nothing save one hungry T-Rex. Once the player entered the maze, the dinosaur would begin to stalk them while they frantically searched for the exit. *3D Monster Maze* was not only a technical marvel on the ZX81 but also a thrilling game to play.



Escape 1982

While the theme was very similar to *3D Monster Maze*, *Escape* offered an entirely different type of experience. Although the frantic gameplay was still present, the sheer jump-out-of-your-pants effect wasn't quite there as the player could see the dinosaurs that were chasing them in the one-screen maze. New Generation's first Spectrum game, *Escape* wasn't anything special, but in the need to get product on the shelves, it served its purpose for the new software house and was a decent 16k game.



Knot In 3D 1983

The perspective (and consequently gameplay) may have taken a bit of getting used to, but if you worked out what you were doing and where you were going, it was an original and graphically-amazing game for the time. Essentially a first-person version of the many light cycle games doing the rounds at the time (all influenced of course by the Disney movie, *Tron*), the object was simply to survive for as long as possible. Another technically impressive 3D game from Malcolm Evans, and an addictive one, too.



Trashman 1984

Taking its cue from a throwaway comment made by New Generation's marketing man, *Trashman* took its working class origins and transplanted them into a game about collecting rubbish. Apart from its originality, *Trashman* was a game that oozed quality, from its bright and precise graphics to a perfectly-judged difficulty level, pushing the player to collect the bins faster and faster, while avoiding other vehicular road users. New Generation's most popular and successful game by some distance.



Jonah Barrington's Squash 1985

New Generation's one and only licensed game, *Jonah Barrington's Squash* sprung from Rod Evans' love of the sport, and in particular his wish to meet the most popular British squash player of the time. Malcolm was in charge of creating the sport on the Spectrum initially, and he did a decent job thanks to some smart graphics and fast gameplay that at least made the game playable. Conversions followed for the Amstrad and Commodore 64.



happened was that you needed to go to distributors, and the first thing they would ask was not what the game was about, but how much you were spending on advertising."

With James Day creating the western-themed *Cliff Hanger*, Malcolm began working on his next game, which was definitely *not* the sequel to *Trashman*. "I don't like repeating things and always wanted to try something new, or a new problem to solve," he says. "So I started working on a 3D adventure that was set inside the Spectrum itself." The basic plot to this unnamed game was that the poor Speccy had sprung a leak and the player had to defend themselves against various bugs while also finding a way to plug the water. "The idea was that if you didn't make it, then it went into this snowy screen as if your computer had gone bang," says Malcolm gleefully, "and all you could do then was pull the plug. But the problem was that it was taking too long." *Trashman* had given New Generation six months; after working on his next game for four of those six, Rod asked his brother how much longer he needed. "I said three months and he said categorically that was too long," grimaces Malcolm. "I ended up dropping it, because we needed to produce something quick." Malcolm put together a canoeing game called *Shoot The Rapids*, with Paul Bunn working on a Commodore 64 version. But while he insists it was completed, Malcolm is unsure what happened to the Spectrum version. "Rod was supposed to take it to the duplicators, but I can find no record of it," he says. "I think maybe he thought it wasn't the right standard as I'd rushed it too quickly." In any case, Paul Bunn's C64 version was a decent effort and Malcolm, having already created the inevitable follow-up to *Trashman*, *Travel With Trashman*, was busy working on New Generation's sole licensed game.

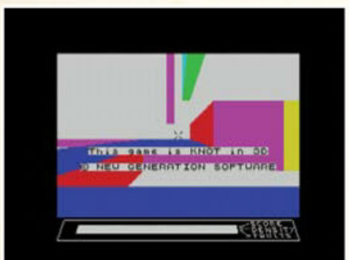
"Rod played squash and was keen on more sports games. He also thought we'd be better off getting a [famous] name to go with the game," explains Malcolm. With his brother's help, the programmer set about crafting a squash simulation for the ZX Spectrum. "I got as much a 'feel' for the game as I could – then we approached Jonah Barrington, who was pretty much the biggest British name in the game at that point, to endorse it. I remember when he first played the game, the first thing he did was miss the ball!" Interestingly, although *Jonah Barrington Squash* was New Generation's only published licensed game, it wasn't its only attempt. "We did actually try to get the actor who played a dustman in *Coronation Street* for *Trashman*," reveals Malcolm, "but he wanted so much money that we decided it wasn't worth it."

By 1985, the computer game market in the UK was changing rapidly. The bigger software houses such as Ocean and US Gold were beginning to dominate the scene. Realising this, Malcolm and Rod decided to leave the industry. "We ended up selling the rights to our games to Virgin," says Malcolm, "which was quite saddening as it meant all our existing stock had to be destroyed." We shudder at the thought of copies of *3D Tunnel* and *Corridors Of Genon* being remorsefully dropped into an incinerator; yet one classic was spared this fiery doom, as Malcolm recounts. "The day before we signed the rights over we had an order for 100 *3D Monster Mazes,* which was all our remaining stock of the game. So they at least were saved." The rest of New Generation's output that remained was destroyed as Virgin began marketing new versions of its games.



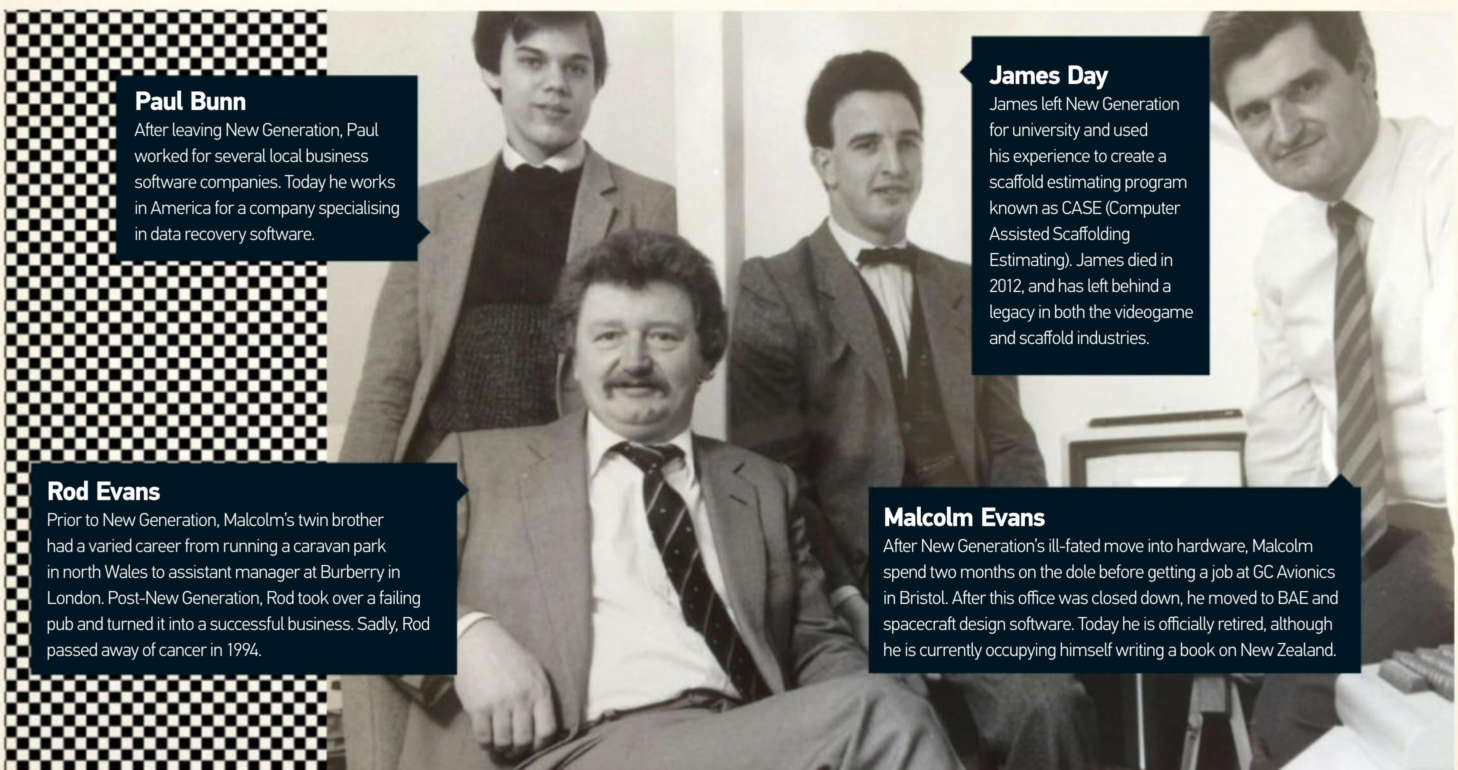
» Malcolm wasn't particularly pleased with either cover for *Cliff Hanger*.





» [ZX Spectrum] Ah yes. A cunning pun.

WHERE ARE THEY NOW?



Paul Bunn

After leaving New Generation, Paul worked for several local business software companies. Today he works in America for a company specialising in data recovery software.

James Day

James left New Generation for university and used his experience to create a scaffold estimating program known as CASE (Computer Assisted Scaffolding Estimating). James died in 2012, and has left behind a legacy in both the videogame and scaffold industries.

Rod Evans

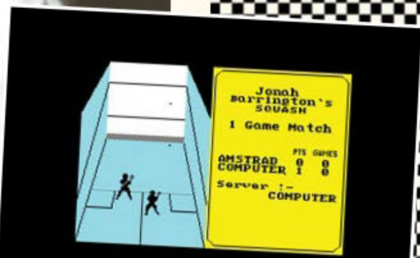
Prior to New Generation, Malcolm's twin brother had a varied career from running a caravan park in north Wales to assistant manager at Burberry in London. Post-New Generation, Rod took over a failing pub and turned it into a successful business. Sadly, Rod passed away of cancer in 1994.

Malcolm Evans

After New Generation's ill-fated move into hardware, Malcolm spend two months on the dole before getting a job at GC Avionics in Bristol. After this office was closed down, he moved to BAE and spacecraft design software. Today he is officially retired, although he is currently occupying himself writing a book on New Zealand.



» Rod Evans proudly displays *Jonah Barrington's Squash* to the man himself.



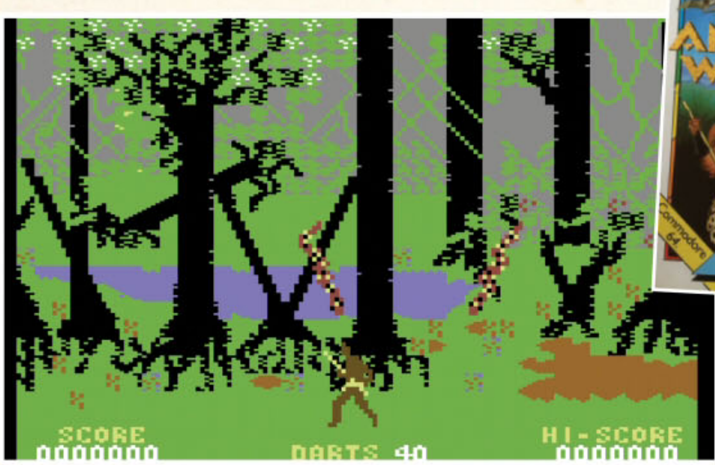
» [Amstrad] *Jonah Barrington's Squash* was an admirable attempt at bringing the racket sport into home computer form.

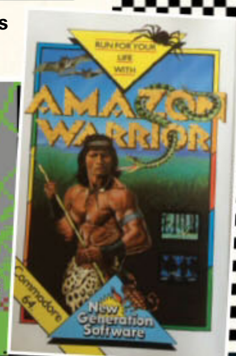
"Trashman did really well, which was vital for a small software house like us" Malcolm Evans

Yet New Generation did not end here, although Paul Bunn was moved on by Malcolm and Rod and James Day departed for university. "We tried to produce a portable computer," notes Malcolm, "although actually it was more a luggable computer…" Containing a printer, slot for plug-in cards and a touch screen, the computer was ahead of its time and was created with a specific purpose in mind. "It was for designing kitchens, so the salesman could place units and you could immediately print out the design. It could show changes straight away, and a salesman we tested it with said he got a sale every time he used it." New Generation sold the concept to Schreiber in what they thought was an instant huge market. Unbeknownst to them, each Schreiber store was a franchise and required an individual demonstration. Lacking the resources to tackle this task, New Generation finally folded in 1989.

When it comes to the end of New Generation Malcolm remains phlegmatic. "We needed a big investment to carry on making games. You had to have a lot of money to launch a game, the cost of advertising was going through the roof and the games had to be good sellers. I think I wanted a change as I was often working all hours." Strangely, Malcolm never thought much of his role at the birth of the UK videogaming industry until recently. "After my wife died, my subsequent partner never knew anything about New Generation," he explains. "It was only after I was approached about *3D Monster Maze* that I even realised that this stuff is important to people. I've worked on many things, perhaps more important to humanity than videogames, so it was just another period of my life, a period that was interesting. I think I was bored with hardware and then bored with software. That careers officer, in a way he was right, it was a young man's game. But in the end I'd done both, and enjoyed both, so it worked out quite nicely. Another cup of tea?" *

Our thanks to Malcolm for his time – and the tea and cake!



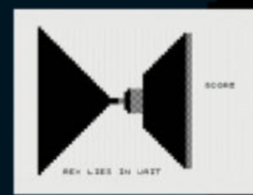


» Oops…the derivative *Amazon Warrior*.

THE DNA OF NEW GENERATION SOFTWARE

The Third Dimension

While early 8-bit games were a bit loose with the term, Malcolm's games could truly claim the common epithet.





Independence

New Generation's freedom to create what it liked resulted in original games such as *Trashman*.

Originality

From the first-person light cycle game to playing a dustman in *Trashman*, New Generation always looked for fresh ideas.



Trying New Things

Malcolm Evans in particular always wanted to try and see what technical trick he could conquer next.



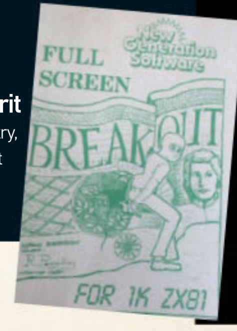


Good Business Practice

Determined that things should be done the correct way, New Generation helped found the Guild Of Software Houses (GOSH) in an attempt to improve the image of the industry.

That Pioneering Spirit

There at the birth of an industry, New Generation wouldn't last long, but had its role to play.



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SIMON PICK

From his bedroom to Google, from BBC Micro to iOS, from a stuntman to Harry Potter, Simon Pick has had a varied career in the games industry. Andrew Fisher talks to him about conversions, reviews and cats in boxes…

"My father used to work for a French company (SIA) that rented out mainframe time before PCs existed," says Simon. "The first time I used a computer was when I visited him at work in the mid-Seventies (I must have been about ten-years-old). I played an early adventure game on Teletype terminal 'Go North', 'Open Door'– that sort of thing. I was hooked! My current office (Google's office in Victoria, London) is right next door to SIA's building (SIA has since moved) – when I use the printer I get to look at the building where I first used a computer!"


» Simon hard at work, during the Eighties



» [C64] Stephen Robertson's loading screen for *MicroRhythm*.

So Simon, let's start with an obvious question: when did you start programming?
My parents bought me a ZX80 when I was 14. It arrived on a school day and after repeated attempts, Mum finally let me take the day off! I spent hours writing daft little programs and figuring out how everything worked. The first game was a stock market game – you spent money on stocks, the values randomly changed and gave you the difference between purchase price and current price. Things have gotten more complicated since then!

So your first game was *Daredevil Denis*, how did the development process go for you?
The first version written in BASIC was slow and flickery. I'd written loads of simple games but this one was annoyingly addictive. A school friend had a contact at Visions and suggested I send off the early version. A couple of weeks later I received a call saying, 'write it in assembly language and make it colourful and we'll publish it.' Apparently the demo version had been left on in reception and visitors had got hooked. I had dabbled in assembly but never written a full game. Vision's interest motivated me enough to figure out everything I needed to write the game in 100 per cent 6502. I was at school and spent evenings and weekends for about a month putting it together. It was terribly written, I couldn't figure out how to do pixel-perfect placement of sprites; so the sprites move two pixels at a time. Given the size of the BBC pixels it was mind-blowing I got away with it.

Then came the C64 version…
I was used to having a bitmap screen on the BBC, so sprites and hardware scrolling, and all the other C64 bells and whistles took a while to get used to. I didn't want to do a simple rewrite so I changed a lot. When it was finished I still thought it lacked something and added the bizarre jump-over-the-flowers section … I have no idea what I was thinking!

What inspired you to make *MicroRhythm*?
I was a keen amateur musician and had bought an analogue to digital converter with the idea of using it as a sampler (Art Of Noise was big at the time).



» [BBC] Where it all began – *Daredevil Denis*.

I started putting a sequencer together for my own personal use, and realised it would make a viable drum-machine. I wrote the whole thing in about two weeks – which is why it is so simple and limited!

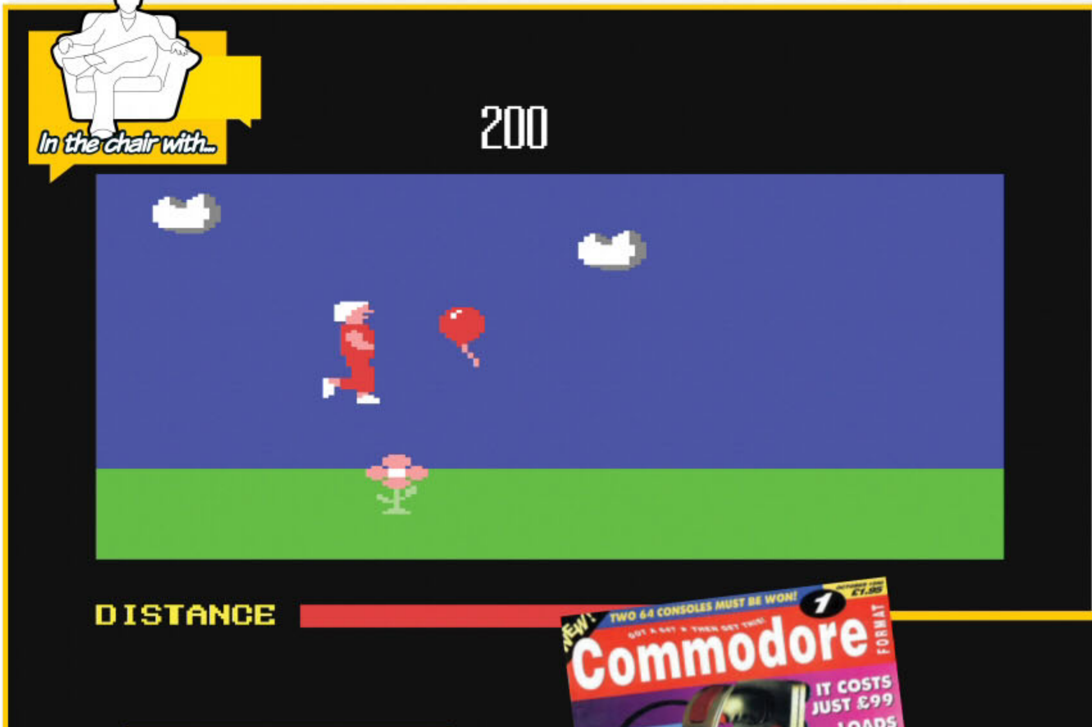
You used a lot of samples in your C64 work.
For *MicroRhythm* I had a Roland TR-707 drum machine that I sampled. For *MicroRhythm+* I rented a high-end drum machine from a local music store to get a wide variety of sounds. For speech samples I had a cheap microphone, put on silly voices and chose the best. I'm still doing this today – the 'farmer' in *Flipping Sheep* is me doing my best Yorkshire accent!

***Mad Nurse* would spark tabloid outrage today – where did this strange idea come from?**
We had a lot of cats and it was good fun putting them in a cardboard box, seeing how many you could fit before they started jumping out – YouTube is full of cats in boxes! This is the core idea – put babies in their cots, they jump out, and you put them back. The more babies in a cot the faster they jump out. They ended up being babies as opposed to cats due to my (misplaced) teenage views on what was funny.

How did you approach the *Nemesis* conversion?
I was living in Brighton at the time, a seaside town with a lot of amusement arcades. I was never any good at the game, but would hang around and watch the 'cool kids' playing all the way through. I had an early MSX version with cheat codes that let me



> "The SNES was awesome, like a C64 on steroids!"
> Simon Pick



» [C64] Jump over flowers and collect balloons in the introductory level of *Daredevil Denis – The Sequel*.





» [C64] Don't let the babies fall down the lift shaft or play with plug sockets in *Mad Nurse*.



» *Commodore Format* issue 1, with *Revolution* on the cover tape.



» [C64] Unleashing the tractor-beam add-on in *Revolution* attracts crystals and enemies.

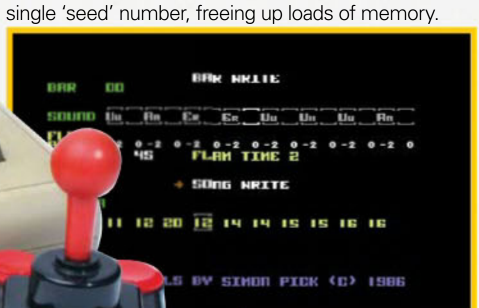
SELECTED TIMELINE

GAMES

- **Daredevil Denis** [BBC] 1984
- **Daredevil Denis – The Sequel** [C64] 1985
- **MicroRhythm** [C64] 1986
- **Mad Nurse** [C64] 1986
- **Nemesis / Gradius** [C64] 1986
- **Planet Search** [C64] 1986 (released as B-side to Bounder)
- **MicroRhythm+** [C64] 1986
- **Silkworm** [Various] 1988
- **Shinobi** [C64] 1989
- **Judge Dredd** [Various] 1990
- **Star Control** [Various] 1990
- **Rodland** [NES] 1990
- **NARC** [Various] 1990
- **Danny Sullivan's Indy Heat** [Various] 1991
- **The Lawnmower Man** [SNES] 1993
- **Die Hard Trilogy** [PlayStation] 1996
- **Terracon** [PlayStation] 2000
- **Jakks Pacific Classic Arcade Pinball** [Plug & Play console] 2004
- **Burnout Legends** [PSP] 2005
- **Burnout Paradise** [Various] 2008
- **Zubo** [DS] 2008
- **Trivial Pursuit** [Various] 2009
- **Harry Potter & The Deathly Hallows Parts 1 and 2** [Various] 2010-11
- **Spare Parts** [PlayStation 3] 2011
- **Flipping Sheep** [iOS] 2013

skip ahead. I initially did the graphics as well – they were terrible! Bob Stephenson was hired to replace my dodgy work with his awesome pixels. I was worried throughout development – it was the first game I'd been hired to write that had a deadline. I planned to write *Nemesis* during my University's summer holidays, but it ended up running over; there was a terrible couple of weeks when I was attending lectures, writing software for my degree and then rushing home to work on *Nemesis* until the early hours. I fell asleep in lectures and didn't learn much!

Slimey's Mine was another budget hit – how did you cram in two game styles and speech?
Something I have done for many games is random level generation. You write a function that can judge the difficulty of a level, then cycle through pseudo-random numbers until you generate a level of suitable difficulty. This allows you to compress a level into a single 'seed' number, freeing up loads of memory.



» [C64] Four different sets of samples were available in *MicroRhythm+*.

The *Shinobi* conversion was a triumph – was it hard work for you at the time?
It was tricky. Doug Hare (of *IO* fame) had shown me how to write a colour-scroll on the C64, without that it would have been almost impossible. I had a full-size *Shinobi* cabinet in my house, which meant I got a lot of people turning up to visit me all of a sudden.

What led to the formation of The Sales Curve?
I wanted to try out management! I'd finished my degree and had been writing games throughout and wanted to try something different. I stuck it out for about 18 months, but lack of decent C64 programmers meant I kept getting pushed back into programming. It was stressful trying to juggle hats and I was making less in my full-time job than writing games in my bedroom! I learnt a lot and met some great people, but it was a stressful introduction to the world of having a real job. Eventually I cut my losses and became a freelance programmer for Sales Curve, working from home. I was much happier!

How did *Revolution* end up on *Commodore Format*'s cover-tape?
I spent the summer after I'd finished my degree working on *Revolution*. I sent early demos to a number of publishers and had some interest – including one that asked if I could stop the screen rotating! I was holding out for a decent up-front payment whilst tinkering with it. The Sales Curve job came up and I no longer had the time to take on board the various publishers' suggestions. I was approached by *Commodore Format* asking if I had any



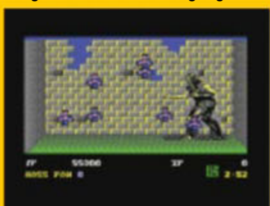


FIVE TO PLAY

The most important games of Simon Pick's impressive career

SHINOBI [C64] 1989

■ You can read more about Simon's efforts to convert the arcade classic in issue 132's Ultimate Guide. Accurate maps, large bosses, attention to detail and great graphics from Ned Langman make this one of the best conversions of the original. The 3D bonus game and the Ninja magic effects are real highlights.





REVOLUTION [C64] 1990

■ Simon admits he would have loved to convert arcade smash *Sinistar*, but this is as close as he came. The player's ship sits in the middle of the screen and the display rotates around it, the aim to collect enough crystals by shooting asteroids to advance. Waves of enemies can be destroyed to earn credits for useful extra weaponry.

DIE HARD TRILOGY [PLAYSTATION] 1996

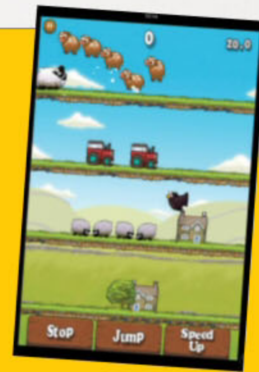
■ Yippee-ki-yay, melon farmers! With great reviews and three very different game styles (third-person action for *Die Hard*, first-person shooting for *Die Harder* and driving for *With A Vengance*) to represent the films, this is a trilogy of fun. You can read about the making of this classic game in issue 69.





ZUBO [DS] 2008

■ An early DS effort from EA, this may have passed many gamers by – which is a shame. Explore the cute world, complete quests and recruit the friendly Zubos, much like *Pokémon*. Take them into battle with evil Zombos, defeating them by tapping in time with the music to deplete their energy with a variety of funny special moves.



FLIPPING SHEEP [iOS] 2013

■ Simon's first iOS release draws on the same idea as his first ever game – get the main character (in this case a cuddly sheep) through platforms filled with obstacles as quickly as possible. With more than 60 levels to plough through, you will be playing this one until the cows come home.

unpublished original games. They paid enough money to make it the easy option; I could have got more selling it to a publisher, but the cover mount option meant I could declare it finished and move on.

Working on the strategy game *Star Control* must have been very different.

The original developer we'd hired wasn't up to the job, so I took over at the last minute. I remember a lot of late nights. On the plus side it was really easy to test for bugs; I would set up both players to be AI-controlled and let it play itself overnight (A trick I re-used for *Trivial Pursuit* years later). At first I'd come back in the morning to find it had crashed, and would spend the morning digging around to see why. It got more reliable as time went by!

What about other conversions?

Indy Heat was a quick turn-around; I think it only took two months to develop. It was simple, a non-scrolling screen and four sprites. I had time to write a decent SID music player, multiplexing chords onto a single oscillator and other fancy stuff. Ironically, I ended up not really using it to the full, writing a 30-second music loop that plays endlessly until you want to pull your ears off. The arcade game had a feature called 'Danny's Pick' that spent your money on the best upgrades. For one demo I changed this to 'Simon's Pick' as a joke, it stuck and was released that way!

About this time I converted *NARC*. That featured run-time generated sprites for the titles and getting the dead enemies to sink into the floor.

> "It's a shame you can't send notes back in time to your previous self!" Simon Pick

Did you pay attention to reviews?

I paid attention to good reviews! I always had a love/hate relationship with the games I've developed. By the time they were finished I would be so sick of them that I was their hardest critic. Any review that didn't say the game was awful felt like an OK review to me!!

can see that there is a mixed bag of quality, with a couple of stand-out games. The reviews of *Die Hard Trilogy* were amazing. There were a few of reviews that literally said 'just go out and buy this game'.

Going back to your earlier work, Virgin's *Judge Dredd* game was poorly received, what happened with that game?

That was my first real train-wreck of a project. We'd developed *Silkworm*, that had amazing reviews and we got over-confident and thought we could do it again. We hired a new team and assumed the magic would seep across. I definitely dropped the ball; lots of little things were going wrong and I didn't notice because I was spread too thinly running three or four projects simultaneously. Deadlines and margins were tight in those days and there comes a point when it's too late to save a project – you just need to accept that it's going to fall short.

You worked on *Rodland* for NES, how was that?

The NES had some idiosyncrasies, but it was surprisingly powerful. The scrolling was super easy, it had 256 sprites without needing to write a multiplexer, and could play samples. I had the most fun writing the music; I copied the main theme from the game and then just went bananas and wrote loads of different tunes. *Rodland* was released at almost exactly the same time as the SNES was launched, and ended up selling hardly anything at all. I have even heard that the PAL version of *Rodland* is the rarest NES game in existence!

So, what happened with *The Lawnmower Man* on SNES? That was a mixed bag…

The SNES was awesome, like a C64 on steroids! Hundreds of giant sprites, great colours, amazing graphic modes, tons of memory and a separate CPU for audio. My main regret over *Lawnmower Man* is that it wasn't released in its best form. As we approached release one of the artists played the



» [SNES] Open these green portals to experience the 3D worlds of *The Lawnmower Man*.



» [SNES] 3D gaming based on *The Lawnmower Man* film which was based on a Stephen King short story.

In the chair with...

YOU ASK THE QUESTIONS

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DEADPAN666: I loved *Terracon*, was a sequel planned?

After *Terracon* we moved onto PS2 development, but didn't consider a sequel. We'd put a lot of time and effort into *Terracon* and all felt really deflated when commercial success eluded us.

HIRO: Was there one game type you liked working on the most?

I liked the pure intellectual challenge of creating the AI for *Burnout Paradise*. There was a month-long period when every time we demoed the game to Alex Ward (the creative director) the cars would drive into walls and smash into bridges… I'd end up looking stupid and saying, 'but it worked yesterday!' It turned out that immediately before every demo the art department would upload new road geometry that accidentally trashed all the navigation metadata… I was relieved when we figured that out!

CHURCHY: Which publisher provided the most positive experience?

I enjoyed my time with Firebird, they were easy going and making budget software was low stress. Fox were amazingly supportive – they somehow managed to get hold of unreleased low-level code before it was released to the development community. Fox wanted to set me up as an studio to create a *Die Hard Trilogy* sequel. In the end I went with Sony as they'd greenlit [*Terracon*], but in hindsight I would have been much richer today had I gone with Fox!

DRS: Was *Mad Nurse* a piece of gritty social realism, a critique of the state of the NHS under the Thatcher government?

Yes, I was a very political young man. Those babies-at-risk were a call to arms. I think the defeat of the Conservatives in 1997 was entirely down to *Mad Nurse*!

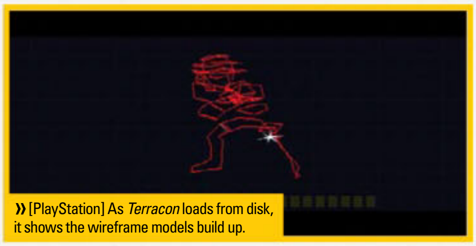
game and decided to crouch all the way through. It turned out that the game was ridiculously easy if you did that. Time was short and an executive decision was taken to simply double the hit points for all the enemies and make everything harder – and instantly the game became unplayably hard (unless you crouched). There are loads of great 3D sections and 2D platform stuff most players never saw.

Then came PlayStation and *Die Hard Trilogy*…

I approached *Die Hard Trilogy* as if it was a 2D game… I struggled on with just me and an artist for a while, until it became apparent that we needed a much bigger team. Not just working on the game, but also we needed tools to let us create levels, animate characters and apply textures to the models. We ended up with a team of five programmers, three mappers, three 3D-modellers and two 2D-artists, which was huge in comparison to my previous projects. We bit off way more than we could chew; if you compare the polish and attention to detail with its contemporaries (*Tomb Raider*, *Crash Bandicoot*), *Die Hard Trilogy* is woefully lacking!

But you still look back fondly on it?

Absolutely. It was really hacked up and is held together with string and sticky tape but had a good heart! We didn't know what we were doing and were stupidly ambitious but I think the love and passion comes through. I've described it as catching lightning in a bottle – we could have all got electrocuted, but instead managed to come up with a mangled piece of madness that is highly entertaining. A couple of years ago a colleague came up to me, shook my hand and thanked me for making his 1996 Christmas



» [PlayStation] As *Terracon* loads from disk, it shows the wireframe models build up.



» These schematics show how *Terracon*'s buildings and characters were built around wireframe models.

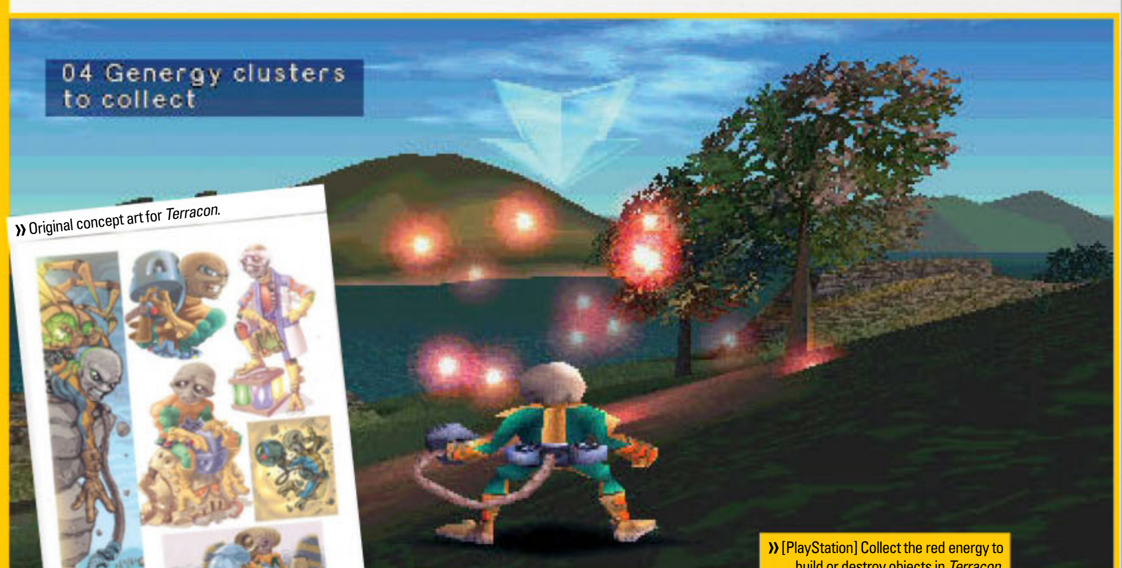
memorable – he'd received a copy and had played it non-stop all through the holiday. It's rare to get direct feedback from the public, so that was really nice.

You set up PictureHouse and worked on *Terracon*. Was it disappointing that it didn't receive a North American release?

Yes it was. Sony weren't keen on it being a sci-fi shooter – which is ironic because we originally pitched it as a boy scout with magic gloves! I think often bigger publishers will put a ton of different games into development and then cherry pick. My biggest regret is that I didn't fight harder and make better decisions for *Terracon* – so much hard work went into forming PictureHouse, building a team and making the game that I had no energy left to fight to get more recognition for it. It was also a mistake trying to run a company and be lead programmer; I needed more distance between the game and me in order to make the harder decisions.

Have you had many cancelled projects?

I have at least five or six projects that never saw the light of day. I had no C64 project cancelled, but around the time of the PlayStation, the advertising budgets started exceeding the development budget, so cancelling a project that wouldn't recoup its costs made sense. After *Terracon* we developed a



» [PlayStation] Collect the red energy to build or destroy objects in *Terracon*.

» Original concept art for *Terracon*.



» [PlayStation] Xed completes the training mission in *Terracon*.

building demolition game that was really cool but we got cancelled in the aftermath of the September 11 attacks, when collapsing skyscrapers no longer seemed much fun. I've started work on reboots of three big-name franchises which never made it past the first three months of development – it's always a shame when things get cancelled but there is a small part of me that is relieved when the end of project crunch also goes away! I've got a couple of half-finished iOS games knocking around on my Mac at home, but life and work seem to conspire to take up all my time. I have a notebook with a ton of game ideas that I'll never get a chance to develop, let alone begin and cancel!

Who did you enjoy working with?
All the PictureHouse guys were great (mostly the core *Die Hard Trilogy* team), we had a tough five years but they worked their socks off to make the best game we could. Tony Crowther and I crossed paths in EA. That was great, we'd talk endlessly about the good old days. I spent some time hanging out with Doug [Hare] and Bob [Stephenson] back in the Eighties. I went up and stayed with them for a while during the development of *IO* – happy days! I have huge respect for all the artists I've worked with – they seem to be the unsung heroes of development; they are all so talented and can do impossible things within crazy technical limitations. I've met many great developers who have taught me so much. Ronald Pieket showed me that there are often really elegant solutions to apparently impossible problems if you just look at things in the right way.

You worked on the *Burnout* series, though, working on that must've been fun.
I got involved at the end of *Burnout Legends* for PSP, I spent a couple of weeks implementing one of the game modes. After that I moved to Criterion and worked on *Burnout Paradise* as lead AI programmer. That was an awesome project, and remains one of my favourite games that I worked on to play (*Rodland* being the other). Play a simple Race or a Road Rage and it's me driving the cars and smashing you into the walls! Getting AI cars to steer around that huge map, avoiding other traffic, obstacles in the road, and following you down arbitrary routes was really tough and it was a huge relief when I figured out how to do it – it was a departure from other driving games.

What was developing Zubo for DS like?
I was lead gameplay programmer – it was good fun. After working on PS3 and Xbox 360 at Criterion it was nice to return to a machine with limited hardware. I'd never worked with touchscreens before so it was a good learning experience. Development took about a year, the name seemed to change every few months! The original name was abandoned when it turned out it meant something like 'sewer worm' in Japanese.

So how did you get involved with working EA and the *Harry Potter* franchise?
I lead early prototyping efforts on the first *Deathly Hallows* project; development went badly off the rails, with immovable deadlines forcing us to take hard decisions. The final game ended up very far from our original ideas – the whole team was very disappointed. *Deathly Hallows 2* was better, but still fell far short of our vision. I was drafted in to help out with a couple of the bosses – the in the rafters battle between Voldemort and Harry, and the 'Apparate' courtyard battle. I was a gameplay coder on *Spare Parts*, working on AI and player control. It was a nice short-term project. I was also lead programmer on *Trivial Pursuit* – that turned out really well. Probably one of the smoothest development cycles I've been involved with, a great team and a strong simple design.

> “We didn't know what we were doing and were stupidly ambitious”
> Simon Pick on creating *Die Hard Trilogy*

When working on *Flipping Sheep* for iOS, was it like being a bedroom coder again?
It was a great experience. People kept telling me I should write *Daredevil Denis* for iOS, so eventually I gave in and 're-imagined' it. I'm pleased with how it turned out – it took much longer than I planned (I seem to have become a perfectionist over the past couple of decades) and with hindsight the control mechanism isn't really that suitable for touchscreens, but it fulfilled my initial vision for it. It didn't sell very many copies, but I'm still glad to have done it. I used to get a twinge of nostalgia whenever I saw people playing 2D sprite-based iOS games, thinking 'I could do that!' I don't have that pang anymore!

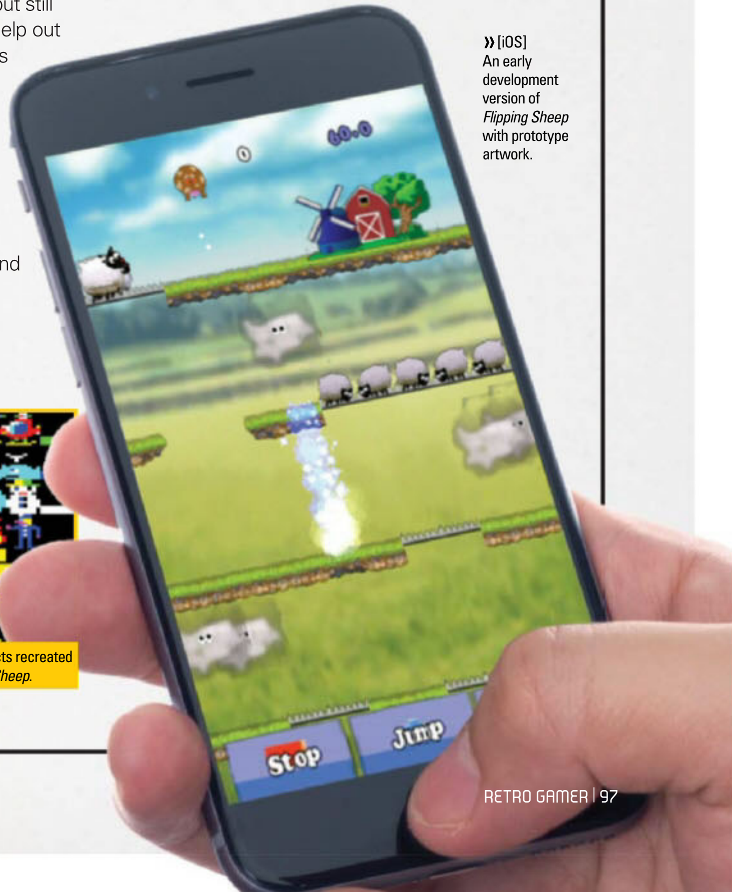


» [iOS] The *Daredevil Denis* objects recreated for what would become *Flipping Sheep*.

What are you working on?
I'm at Google now, working on making Chrome for Android faster. It's great low-level down in the guts work! The change in the power of hardware from the ZX80 to the latest phones is just insane... 35 years of Moore's Law has left machines from the Eighties looking a little sorry for themselves.

Would you ever go back to the old machines?
I'd go back to the old machines and write old games for them! I visited the Google campus in Mountain View recently and they have a arcade in the Android building, with *Asteroids*, *Galaxians*, and *Defender*. I was very happy! I suspect it is pure nostalgia – these old games remind me of my youth pushing money into coin-ops. I recently downloaded my old work and spent a few of evenings playing the old stuff. I would hold my head in my hands wondering why I had made such stupid design decisions. It's a shame you can't send notes back in time to your previous self!

Where do you see the future of games?
I think it will continue to fragment, creating more niches for a widening audience. I hope iOS and Android continue to be platforms that allow coders to share their work; there was a dark period in the Nineties where you needed a team of people and tens of thousands of pounds to buy licences, hardware and arrange distribution. I'd love to see a future that empowers everyone to create and share games the way up and coming musicians can share music. Long live the bedroom coder!



» [iOS] An early development version of *Flipping Sheep* with prototype artwork.





Final Fight CD

MATT SHAW TAKES ON THE THUGS OF METRO CITY

» RETROREVIVAL

» MEGA-CD » CAPCOM » 1993

A terrible kidnapping has taken place in Metro City and you must take control of one of three heroes (Guy, Cody or Metro City's mayor, Mike Haggar) out to rescue Rena, Haggar's daughter, from the games' evil boss.

Final Fight on the Mega-CD wasn't the only conversion of the classic arcade beat-'em-up, the SNES version being one of the more popular versions of the time, but this version for Sega's Mega-CD is by far the best, in my view at least.

The arcade original was massively popular and the Mega-CD version, licensed by Sega from Capcom, carried on that trend terrifically. What I love about this version is that the sprites are clear and crisp and I think the game moves really well. The colours are bright and there is no clashing with the backgrounds.

The visuals are one of the biggest selling points of this conversion, and, to me, great visuals combined with solid gameplay help make a game that more enjoyable to watch and play. The music is great and is way ahead of this version's sound effects, which were sadly ported from the arcade original instead of being remade.

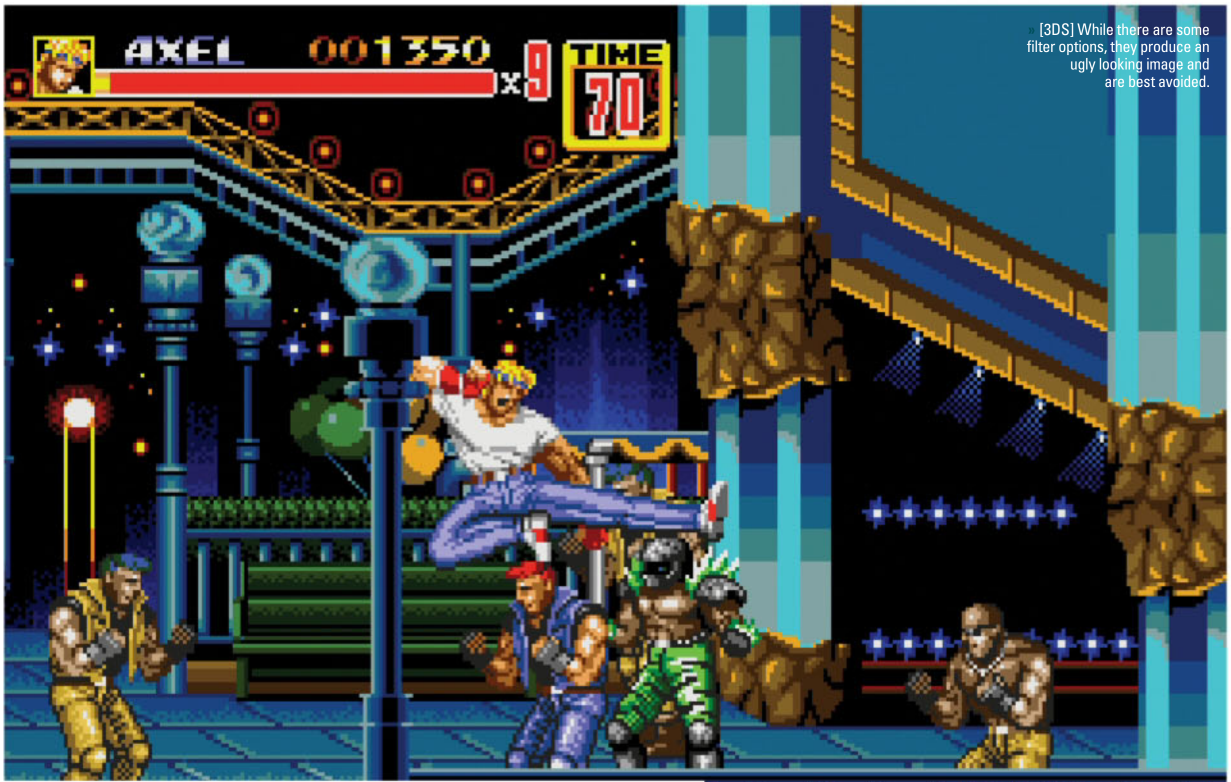
The remastered soundtrack is in a typical Eighties action movie arrangement (so fast guitar riffs and pounding drum kicks), I can't help but turn up the sound and play and also rock out afterwards listening to the tracks on the Mega-CD music player!

Here *you* are the hero, ballin' down the sidewalk busting heads and taking out the bad guys in style. The gameplay is simple but fast and relentless as you plough through levels to reach the big boss. You can pick up knives, bits of tubing and more to assist in your fighting along the way, its always a bit more fun to take out the bad guy with a bat!

Health can be replenished by chomping down the usual roast chicken or apple which you find on the pavement and also other objects can be smashed to find hidden extras. All of all this adds up to a great beat-'em-up. You can just pick up and play and the visuals are very impressive throughout, but sadly there's no two-player option, though! *



>> There's a bit of a Sega theme this issue. We look at Sega's latest addition to its 3D range and discover if Tembo The Badass Elephant is worth your time or not



» [3DS] While there are some filter options, they produce an ugly looking image and are best avoided.

SEGA'S STUNNING BRAWLER GETS A 3D OVERHAUL

3D Streets Of Rage 2

INFORMATION

» **FEATURED SYSTEM:** 3DS
» **ALSO AVAILABLE ON:** N/A
» **RELEASED:** OUT NOW
» **PRICE:** £4.49
» **PUBLISHER:** SEGA
» **DEVELOPER:** M2
» **PLAYERS:** 1-2

» [3DS] The local multiplayer is solid, but you'll both need a copy of the game to use it.



For many *Streets Of Rage 2* is considered to be the greatest scrolling beat-'em-up of all time. It should come as no surprise then to learn that it's been one of the most requested games since Sega started converting its back catalogue to the 3DS. Still, if you've never played or seen Sega's hit game in action before allow us to explain why it's so highly regarded.

Streets Of Rage 2 is a scrolling beat-'em-up and follows directly on from the events of the original game. Blaze Fielding and Axel Stone return to once again patrol the dangerous streets, but Adam Hunter is nowhere to be seen. Instead, two new characters are playable; Skate, Adam's younger brother, and Max, a giant tank of a man who is as powerful as he is slow. All four characters play differently to each other, ensuring *Streets Of Rage 2* has plenty of longevity once you complete its eight lengthy stages.

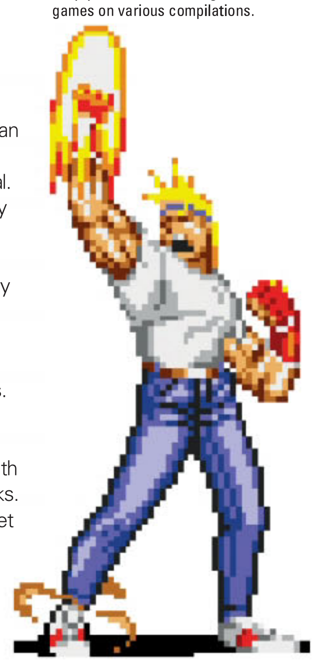
The levels themselves aren't the most imaginative, mainly repeating those found in the original game, but they do look fantastic, bursting with detail and vibrant colours. The same can be said for the sprite design, which is far more impressive than in the original. Axel and friends have been completely overhauled and now look bigger and more imposing. They're also better animated and are complimented out by some equally well-designed enemies.

While there are only eight stages to battle through they're all fairly large and often broken up into smaller areas. There's a great selection of weapons to pick up too, while each character's moves have been greatly bolstered with each hero having unique special attacks. Max is perhaps the most difficult to get



BRIEF HISTORY

» The original *Streets Of Rage* was released in 1991 to compete with Capcom's *Final Fight* (which was exclusive to the SNES at the time). Its stunning soundtrack and two-player gameplay helped make it a big success on Sega's Mega Drive and it was followed by a sequel in 1992 and a third game in 1994. Sadly, despite it's popularity, the series has struggled in recent years, with Sega seemingly content to simply re-release the original games on various compilations.



✱ PICKS OF THE MONTH



DARRAN
3D Streets Of Rage 2
It's not as solid as the likes of *3D Out Run* and *3D After Burner*, but it's still an impressive update.



NICK
3D Streets Of Rage 2
Sega's beat-'em-up is one of the best examples of the genre and this is a cracking port too. I just wish online play had been included.



to grips with due to his sluggish speed, but he's still fun to play with, particularly when enemies start constantly crowding you. It's all held together by another astonishingly good soundtrack by Yuzo Koshiro, which could be better than the brilliant original. As with many beat-'em-ups it becomes much more enjoyable when played with a friend (with local support only, sadly) but there's enough variety to the combat, enemies and stages to ensure that it's still entertaining when playing solo.

Although the gameplay remains as good as ever, developers M2 has made plenty of tweaks to the core game to ensure that there are new surprises for those that will have rinsed the original. Although it lacks the sheer amount of options found on most of M2's arcade ports, there are still plenty of cool tweaks that can be made. Both the international and Japanese versions of the game are included and it's possible to add a filter to make your 3DS look like a curved CRT, with the relevant composite output. It's nice to have it included, but you're unlikely to return to using it at a later date. Other tweaks include the ability to choose between the Mega Drive and Mega Drive II sound chips, the option to remap moves to whatever buttons you want, and a choice of either 'fall-in' or 'pop-out' 3D. While both the 3D outings are decent,



» [3DS] The 3D is solid enough, but it never really jumps out at you like some of the past updates.

★WHY NOT TRY

▼ SOMETHING OLD
FINAL FIGHT (ARCADE)



▼ SOMETHING NEW
DRAGON'S CROWN (PS VITA)



the nature of the original game means it's never as effective as it was in the like of *3D Out Run* or *3D After Burner*. It still manages to impress at times and constantly gives the impression that the game's characters are moving away from each other, even if they do always stay the same size.

In addition to adding some solid 3D effects, M2 have also introduced a number of new gameplay extras. One of them is the new 'Casual Mode' that enables you to take out every single enemy in the game with a single attack. It doesn't matter whether you're facing off against a single grunt or downing the final boss, as soon as they head to the floor all their energy depletes. While it's fun for a one-off playthrough, the sheer amount of tweaking you can make to the game's difficulty means it isn't even needed (although it is quite funny during execution). The more significant change to the game is called 'Rage Relay'. Play starts as normal, but after you've selected your main character you choose the remaining three. Once your character is downed you'll move onto the next, continuing until you're run out of lives. It's certainly a nice touch, allowing you to mix up the action and stop the game from getting too stale but it's not quite as substantial as some of the gameplay improvements that have appeared on some of M2's other games. Thanks goodness then for the amazing credits sequence which is one of the funniest we have ever seen and has the game's heroes getting up to all sorts of silly shenanigans.

While there's absolutely no denying that 3D *Streets Of Rage* plays as well as it ever did and sports faultless emulation emulation, it's not quite the pinnacle of Sega's 3D series. ★

In a nutshell

An excellent game at a great pricepoint, but it's not the best 3D conversion that M2 has created. It's hard to argue when the game's this much fun though and it's the perfect introduction for those who might have never played it before.

8 RetroGamer_Mag scored 8 for
3D Streets Of Rage 2
Follow our scores on JUST A SCORE



[3DS] Both the International and Japanese versions of the game are available, meaning you'll play as Skate or Sammy.



>> TEMBO THE BADASS ELEPHANT



» [Xbox One] The bosses look imposing but are easy to beat. We nailed this one in 20 seconds.

AS FAST AS AN OLD SONIC GAME, AS GOOD AS A NEW ONE

Tembo The Badass Elephant

INFORMATION

- » **FEATURED SYSTEM:** Xbox One
- » **ALSO AVAILABLE ON:** PS4, PC
- » **RELEASED:** Out now
- » **PRICE:** £9.99
- » **PUBLISHER:** Sega
- » **DEVELOPER:** Game Freak
- » **PLAYERS:** 1

BRIEF HISTORY

» Game Freak started off as a self-published magazine before moving into videogame development. It's most famous for its *Pokémon* series, which began in 1996. Interestingly, this isn't its first collaboration with Sega, having released *Magical Taruruto-kun* and *Pulseman* for the Mega Drive during the mid-Nineties.

WHY NOT TRY

▼ SOMETHING OLD
SONIC THE HEDGEHOG (MEGA DRIVE)



▼ SOMETHING NEW
ORI AND THE BLIND FOREST (XBOX ONE)





There's a lot to love about *Tembo The Badass Elephant*. It looks delightful with its distinctive cartoon styling and lovable main character, the presentation throughout is to die for, while the enemy troops appear to have been drafted from the same army that supplied the *Metal Slug* series. It has everything you'd expect to see from a flagship Sega IP of old. That is until you actually start playing it…

Tembo is a game that's packed with creativity, but it's also a game that squanders that creativity. Game Freak has come up with a charming character, but has tied him to a frustrating game.

Tembo's biggest issues come with its control system. Tembo can pull off uppercuts, smash through objects with his gigantic bum, do sliding floor kicks, put out fires with his trunk and momentarily float in the air, Yoshi-style for a very brief period of time. He's also able to dash through certain objects and run at high speed and can turn into a spinning ball of doom with a quick press of X. And it's here where most of *Tembo*'s problems arise. *Tembo*'s spin attack is all too easy to accidentally pull off, which makes for some very frustrating and unwanted deaths, particularly on the later stages which require very tight precision. It doesn't help that the controls are sticky, which further exacerbates the problems at the core of *Tembo*'s gameplay.

The level design is also problematic. Parts of it show some really clever ideas, particularly when Tembo has to use his trunk to put out enemies and items or activate platforms, but all too often they're one-way death traps. This would be fine if you never had to return to them upon completion, but *Tembo* requires you to kill a set number of soldiers until you can progress to the next stage, which smacks of a rather feeble way of trying to hide Tembo's rather paltry length.

It's great to see Game Freak moving outside of *Pokémon* and we really like Tembo, but this is an disappointing game that frustrates rather than delights. *Tembo The Half-Ass Elephant* would be a more accurate description. ✱

In a nutshell

There's a great new character here, but he's married to an unrefined platformer. A missed opportunity.

4 RetroGamer_Mag scored **4** for Tembo The Badass Elephant
Follow our scores on JUST A SCORE



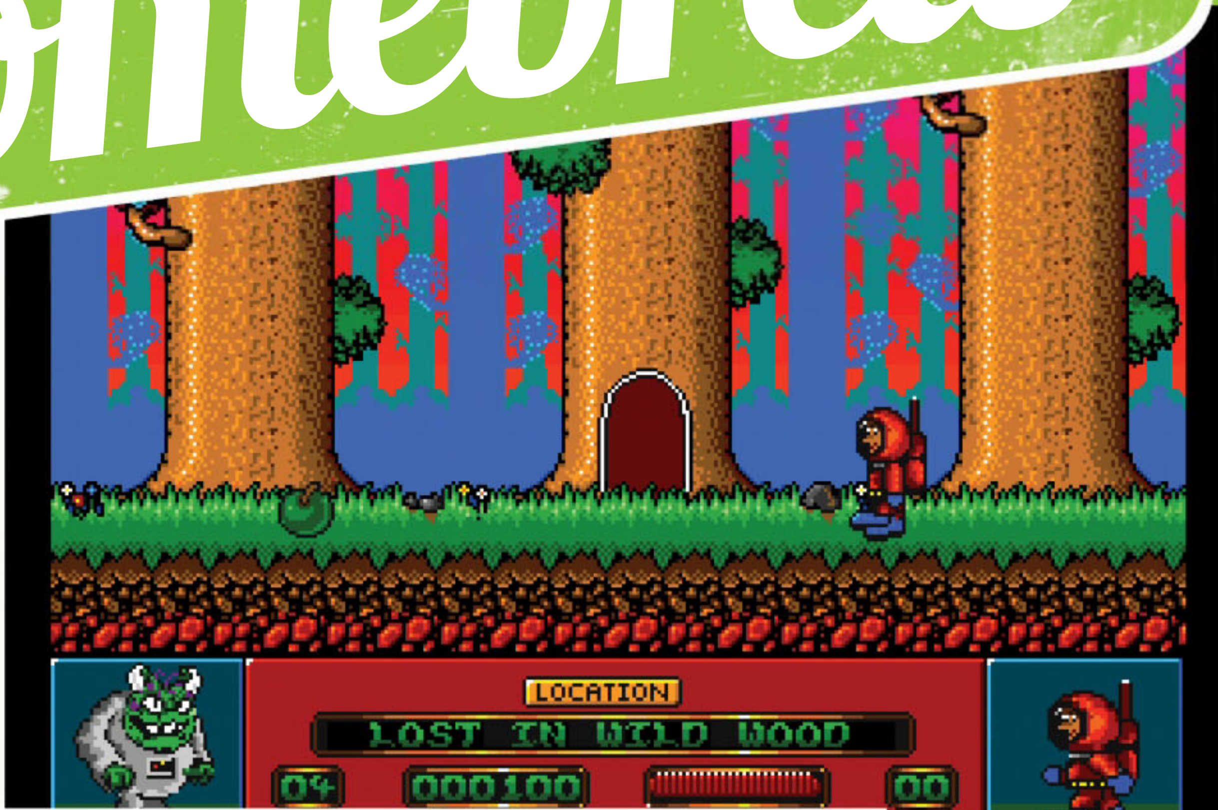
» [Xbox One] You'll get bonus points for rescuing the people found on each stage. Some are extremely well-hidden.

Welcome to

Homebrew



>> I've mumbled previously about how some genres get more homebrew than others, but recently we've seen FMV games like Dragon's Lair appearing for 8-bits and Jam It representing for sports titles and that's brilliant. But there are still a few concepts that could be explored with the code trickery and expansion hardware we have available now… Although with that said, who knows what people are working on behind closed doors?



» [Amiga] Wandering in the woods.

PUT YOUR HELMET ON

We take a look at a Dizzy-esque space adventure

Some delightful green smelly aliens from Mars have made their way to Earth and stolen an amazingly top-secret robot. So the intrepid galactic troubleshooter, known simply as Dylan, has been tasked with finding it by Colonel Wayne, who also wants the Alien Master captured for good measure, presumably to find out who leaked information about the robot's existence and location. Although Dylan's brightly coloured spacesuit is probably going to draw some unwanted attention when he arrives on Earth to begin this assignment, his spacecraft is at least equipped with a cloaking device that allows it to blend in with its surroundings; for reasons best known to its AI, that device settles on an out of date telephone box as being nicely inconspicuous.

Dylan The Spaceman for the Amiga is an action adventure very much in the style of the Oliver Twins' *Dizzy* games and indeed the recently reviewed Amiga release, *Maxwell Mouse* – *Dylan*'s creator, Christian Clarke, was involved with the development that game as well – which means our hero will come across puzzles in his travels around the game's landscape that need solving in order to progress. This process often requires the correct item to be found and delivered to a person or place and talking to the characters can prove helpful since they'll usually be specific about what they need. Not everything is that friendly, however, and there are nasties roaming the screens.

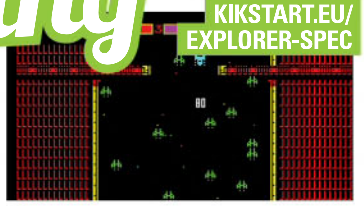
The game will, hopefully, be released by the time this issue appears in print and since everything we've seen so far looks very promising, we're looking forward to playing it. You won't need a spacesuit in order to explore at Kikstart.eu/dylan-eab for more information.

> "Our hero will come across puzzles in his travels around the landscape"

Incoming

This month we have a rather cool Out Run demake and good old-fashioned shmup

KIKSTART.EU/EXPLORER-SPEC



▲ *Explorer* for the Spectrum is a vertically scrolling shoot-'em-up which is based on Atari's *Caverns Of Mars*.

▼ Take *Snake*, add hazards, chain-based bonuses and a time limit and you'll get something like *Serpentes* for Windows.



KIKSTART.EU/SERPENTES-WIN

KIKSTART.EU/RUN-OUT-2600



▲ The name gives the game away; *Run Out* is a nearly compete driving game for the Atari 2600.

NEW GAMES NEEDED

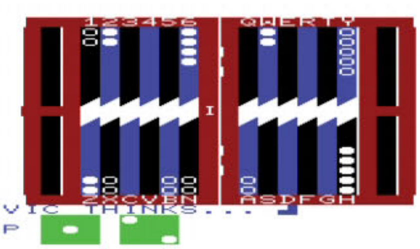
If you have a homebrew project you would like to see featured then please contact us at:
retrogamer@imagine-publishing.co.uk

LET ME COME WITH YOU



» [Atari 8-bit] Don't mind me, old chap.

Atari 8-bit owners missed out on a port of Ocean's *The Great Escape* back in the Eighties, but Atari Age forumite Mariuszw is currently working to rectify that situation by taking the existing C64 version, dismantling the code and converting it to run on a 64K Atari. In fact there's already a playable version and Kikstart.eu/great-escape-a8 conceals a tunnel to the Atari Age forum thread where the download can be found along with the ongoing discussion about optimising the program, fixing of bugs as they're discovered and adding features such as a colourful introduction screen, sound effects and music.



» [VIC 20] A pause for thought.

ALL IN THE WRIST

It might appear to be a bold statement, but programmer Anders Persson claims that his *Boray Gammon* is the best implementation of Backgammon for the VIC 20; that's partly because there hasn't previously been a decent version, but *Boray Gammon* is also a reasonably formidable opponent as well.

The game requires a 16K VIC to run and can also play against itself or allow two humans to compete. Kikstart.eu/boray-gammon-vic links to the download page on the developer's website and there's even a quick guide to playing Backgammon for beginners.

▼ It's at an early stage and *Furry RPG* is just a working title, but this SNES game is looking promising.



KIKSTART.EU/FURRY-SNES

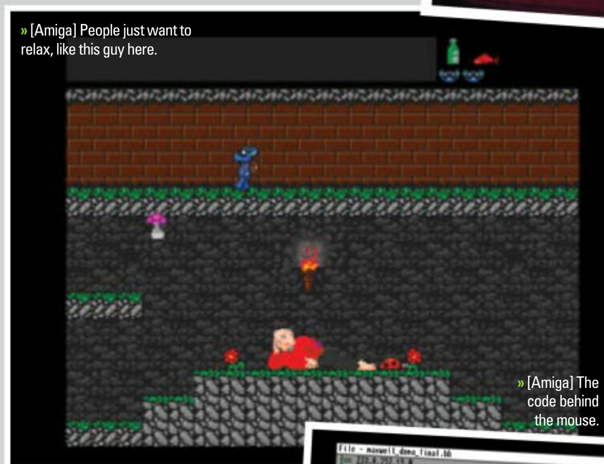
Homebrew heroes



Graham Humphrey is the programmer behind the Dizzy-flavoured Amiga game Maxwell Mouse And The Missing Game Mystery so we walked over to him and pushed up to start a conversation about blue mice and unusual storylines

So how did *Maxwell Mouse And The Missing Game Mystery* get started?
After writing *Downfall* I was keen to work on a bigger project, and being a big fan of *Dizzy* I've always wanted to do a game in that style. I love being able to wander around a big map and finding new locations and it's always satisfying solving puzzles and discovering new screens. Being able to create my own little world with the chance to develop a proper storyline really appealed to me. Myself and Predseda – our artist, and not his real name, surprisingly – quickly rustled up a game engine and some graphics. Later, Christian Clarke of AmigaPD.com also made a big contribution by drawing the tiles used throughout the level map – as well as coming up with the name Maxwell – which kickstarted the project after it stalled for several months.

And where did the unusual story come from?
To be honest I don't actually remember. I think I'd got to the point where I'd designed a map to wander around and got one or two characters in there, and it came out of the need to bolt a story and some puzzles onto the work we had already completed. It was already shamelessly self-indulgent and self-referential so it was a natural progression for the project.



» [Amiga] People just want to relax, like this guy here.



» [Amiga] Lovely day for a stroll.

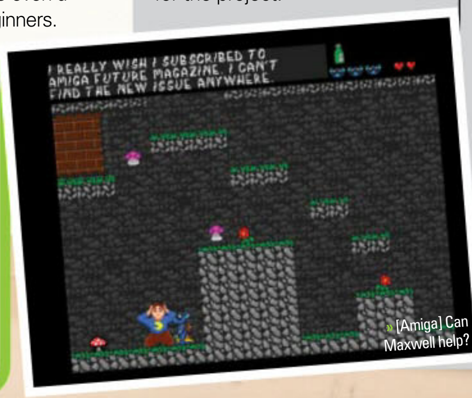


» [Amiga] The code behind the mouse.

Maxwell meets some humans in the game, are they based on real people?
My lawyers have advised me to say, "no, absolutely not, these people are definitely not based on anyone I know in real life, least of all the alcoholic woman in the pool." A few of them are named after us and a couple of other Amiga people but any similarities are coincidental...

What feedback have you received from Amiga owners?
Really positive. It's not an especially long or difficult game but many people have enjoyed playing through it and – much to my relief – liked the humour too. There's been some constructive criticism too which is invaluable to us – this is a learning process for us all and we've already been inspired to incorporate some of the suggestions we've had into the full *Maxwell* game.

And what plans are there for the future?
This is a dress rehearsal for a bigger *Maxwell* game – we're working on a full four-level adventure with a new storyline and an improved engine. I've done a lot of the work in regards to the map designs and puzzles but the biggest task – and biggest stumbling block thus far – is getting all the new graphics produced but with enthusiastic and talented artists like Christian and Wayne Ashworth – responsible for the excellent artwork on the recent game *Renegades Deluxe* – on board, I have no doubt things will start to move quickly, with the aim being to release the game in a boxed form complete with manual, both on floppy disk and for the CD32. *Maxwell* will pop up elsewhere including Chris' own *Dizzy* clone *Dylan The Spaceman* where he makes a cameo appearance.



» [Amiga] Can Maxwell help?



JAM IT

» **FORMAT:** COMMODORE 64 » **DEVELOPER:** THROWBACK GAMES
» **DOWNLOAD:** THROWBACKGAMES.NET » **PRICE:** $2.99 USD (DOWNLOAD) £35.00 (CART)

Sports based games were a mainstay for computers and consoles during the Eighties and Nineties, but for some reason it's rare to see a serious homebrew attempt and we were, therefore, interested to hear about Throwback Games' *Jam It* on the C64. This is a two-on-two basketball game where any or indeed all of the quite cute looking player sprites can be controlled either by a human – the game supports the Protovision four-player adapter so everyone can have a joystick – or the computer.

All of the action takes place at one end of the court with the two teams vying for possession of the ball to take their shot and there are a surprising number of offensive and defensive moves available from a single button joystick. Getting used to this will require reading of the manual followed by a few practice games to acclimatise, but after that, it's possible to both shoot and dunk when holding the ball, block shots or attempt to steal when the other team has possession and the teammates can pass back and forth with a quick double tap of fire. Energy is important, each player has a gauge and loses energy by moving with the ball or trying to steal it from a player; holding still without the ball recharges a player, as does tapping fire when the cheerleaders come out for the half-time show.

The attention to detail is great and includes replays, commentary and highlight shots which can be activated before shooting to slow down time. This game is best experienced with several people but *Jam It* caters for the solo player as well with the option of controlling one or two players against AI opponents with difficulty levels ranging from 'Useless' to 'Brutal' which lets the action to be tailored for different levels of player skill. *Jam It* is available on cassette, disk, cartridge or as a digital download.



8 RetroGamer_Mag scored **8** for Jam It
Follow our scores on JUST A SCORE



» [C64] I found a shining star.



» [C64] Not been accused of hacking for ages!

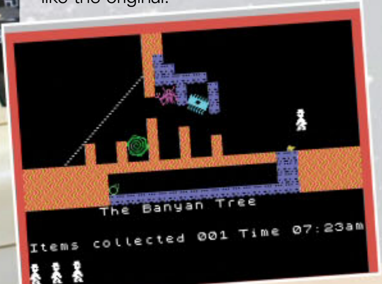


» [C64] The AI is solid and presents a great challenge.

Make this

Every month our very own Jason Kelk will be teaching you handy new programming techniques. This month: converting code

1 Designing a game is tricky, so why not 'cheat' a little and build something that uses existing data from another platform? *Jet Set Willy* on the TI-99/4A is a good example of that since developer Rasmus Moustgaard put a lot of effort into making it play like the original.





2 Another option is to essentially pull apart the existing code before porting it over to a new platform; *Kikstart C16* on the C64 is essentially the C16 code dragged back into an assembler before it was tweaked to run on the C64.

3 Something like *Jetpac Emulator* for the Amstrad CPC achieves a similar result by running an almost unmodified copy of the original code in a virtual Spectrum and then translating both player input and screen output so it can be interacted with.





4 *Jet Set Willy 2007* takes a disassembly of the Z80 machine code and converts it to the 6502 on the Atari 8-bit. All of these options need a good knowledge of both source and target machine, but knowing both assembly languages is a must here.

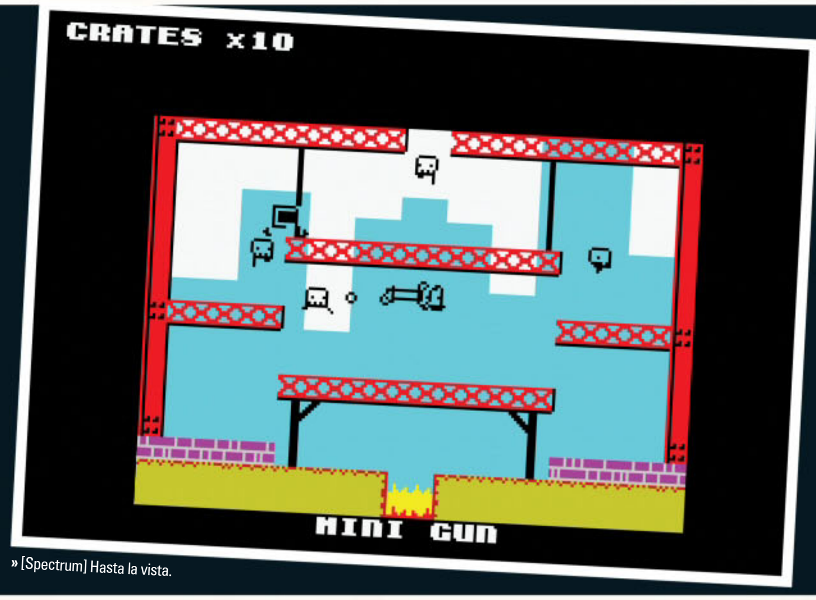
SUPER 48K BOX

» **FORMAT:** SINCLAIR SPECTRUM » **DEVELOPER:** ANDREW VANBECK
» **DOWNLOAD:** KIKSTART.EU/48K-BOX-SPEC » **PRICE:** FREE

***Super 48K Box* is a demake of the 2010 Vlambeer action game *Super Crate Box*. Although there are enemies to worry about which are regularly spawned at the top of the play area to roam the platforms, the aim is to survive for as long as possible and success is measured by how many crates are collected rather than the number of kills.**

The crates themselves contain a random selection from the game's arsenal of weaponry which range considerably in power and, since there's only one life per game, some care must be taken when moving through the busier areas of the playfield; going from a minigun to a revolver that takes ages to kill a larger enemy just as one turns up can be a heart-stopping moment!

RetroGamer_Mag scored **8** for
Super 48k Box
8
Follow our scores on JUST A SCORE



» [Spectrum] Hasta la vista.

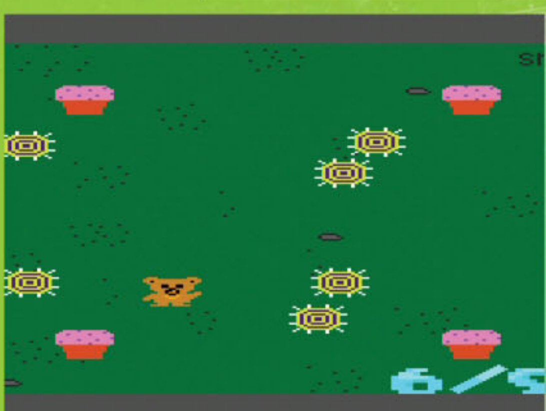
POETIRU

» **FORMAT:** ATARI 7800 » **DEVELOPER:** SEBASTIAN MIHAI
» **DOWNLOAD:** KIKSTART.EU/POETIRU-7800 » **PRICE:** FREE

There are some rather gigantic cupcakes in the levels of *Poetiru* which have, unsurprisingly, attracted the attention of a hungry brown bear, but getting his fill of sugary goodness will require some quick reactions to avoid the spiky enemies which bounce diagonally around the screen. Getting caught will send the bear right back to the start of the level so planning ahead is advised since it's easy to get trapped in a corner by one enemy while trying to avoid another, but there's no lives counter to worry about and a stage can be retried repeatedly without any penalty.

Poetiru is a very simple little game that feels somewhat incomplete; it doesn't have any real variety to the levels but does at least offer a challenge when things start getting busy since each stage has one more nasty than its predecessor. A range of enemies and sound would have done wonders.

RetroGamer_Mag scored **4** for
Poetiru
4
Follow our scores on JUST A SCORE


» [Atari 7800] At least they're not wasps!

JAMES AND WATCH – ARM

» **FORMAT:** SEGA DREAMCAST » **DEVELOPER:** RETROGAMING ROUNDUP
» **DOWNLOAD:** KIKSTART.EU/JAW-ARM » **PRICE:** £25

As with the previous RetroGaming RoundUp release CGE Adventures, this Game And Watch inspired title is based on a true story; in particular the one about a very young Mike James being taken to the local football field by his older brothers Neil and Ian for a game of catch… where he fulfilled the role of the ball!

The end of this story in the real world was a broken arm, but in the game it's possible to influence little Mike's flight so his brothers continue to catch and relaunch him; each throw earns the player a point and if Mike is dropped three times he will be too badly injured to continue.



» [Dreamcast] Art imitating life.

This is a simple game that isn't going to stress the hardware at all, but we did enjoy the *Game And Watch*-styled action. The Dreamcast release will be joined by versions for other platforms soon.

RetroGamer_Mag scored **6** for
James and Watch - Arm
6
Follow our scores on JUST A SCORE

GHOSTS 'N GOBLINS ARCADE

» **FORMAT:** COMMODORE 64 » **DEVELOPER:** NOSTALGIA » **DOWNLOAD:** KIKSTART.EU/GNG-ARCADE-C64 » **PRICE:** FREE

The C64 conversion of Capcom's *Ghosts 'N Goblins* was quite well-received when released in 1986 but, because it was a single load and written to tight deadlines, lacked quite a bit of detail and suffered with some serious bugs. So Nostalgia has taken the original code, given it an anaesthetic and performed some major surgery. Their modifications include a graphical overhaul, some new enemies, extension of the existing levels, two completely new stages, improved enemy AI and lots of bug removal.

The result of these upgrades almost makes it feel like a different game and brings it far closer to the coin-op; the already challenging difficulty curve of the 1986 release has been made steeper by the changes but the collision detection is also fairer too so, although it can occasionally be frustrating, *Ghosts 'N Goblins Arcade* is very enjoyable.



» [C64] Can you smell burning?

RetroGamer_Mag scored **9** for
Ghost 'N Goblins Arcade
9
Follow our scores on JUST A SCORE

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STAR LETTER

FEDERATION FARCE



Dear **Retro Gamer**,
Shortly after E3 I received **Retro Gamer** issue #143 and read about the *Metroid* database. I had to smile after reading the part about how passionate the *Metroid* fans are. They certainly demonstrated that passion in their backlash against *Metroid Prime: Federation Force*. I don't recall ever seeing a petition for a game to be cancelled before. I personally feel that the anger was overblown, but I can also understand to some degree why they are upset. *Metroid: Other M* was not popular among the diehard *Metroid* fans, so as far as they are concerned it has been almost a decade since a good *Metroid* game was released. They had high hopes for Nintendo to announce something at E3, but a multiplayer spin-off game for the 3DS was not what they had in mind.

It seems to me that having a classic IP in your stable can be both a blessing and a curse for publishers. Are retro game fans guilty of being too set in our ways? Are we too close-minded about the possibilities for our favorite franchises to evolve in exciting new directions? Or is it the publishers that are wrong for wanting to have their cake and eat it too with brand new game experiences that have a classic IP slapped on purely just for name recognition? Perhaps it is a little of both.

I am going to try and stay open-minded about *Federation Force*. If it turns out to be a good then I will buy it, even if it does not look like a real *Metroid* game.
Sheridan

Nintendo are well used to backlash, Sheridan. The cel-shaded look of *The Legend Of Zelda: The Wind Waker* had fans in uproar, but that turned out perfectly well. Although Nintendo does make some odd decisions, it does know how to make good games. Hopefully, the release of *Metroid Prime: Federation Force* will continue to prove that fact.

XENOPHOBE CONFUSION

Hi **Retro Gamer**,
As I flicked through RG issue (143) I was more than a little confused by a couple of comments in the conversion capers part of The Making of *Xenophobe* feature.

For the Sinclair Spectrum it states: "This conversion is a superb effort at replicating the coin-op", yet on the very next page for the Amstrad CPC it says,"unlike the lazy Spectrum port…" And therein lies my confusion.

According to the Oxford English dictionary the definition of 'lazy' is "showing a lack of effort or care", and 'superb' is "excellent" as well as "impressively splendid". As you can see, the two comments made in the feature do not make sense, for not only am I being told the Spectrum conversion is more than good, but also that it is actually not that good and could have been better. A contradiction to be sure, which begs the question: which one is accurate?

I look forward to your clarification.
Karl Bullimore



» [ZX Spectrum] There's nothing lazy about the Spectrum port of *Xenophobe*. Sorry if anyone thought otherwise.

It would appear that gremlins were at work on the *Xenophobe* article. The original text read: "Rather than the lazy Spectrum port you might expect, Imagitec went all out with this ultra colourful CPC version." This was obviously changed during the subbing process to make the text fit and Darran missed it. He's now been strung up for the blue tits to peck at.

DISCUSSED THIS MONTH

Console durability

After talking about the ZX81 that sits on Nick's desk, we've been discussing the build quality of today's consoles verses those of yesteryear. Nick feels systems like the ZX81 are bulletproof and that modern systems have too many moving parts, meaning more can go wrong. Drew recalled a tall tale from his Xbox fanboy friend stating that the PS3 had eight lasers which allegedly made it insanely delicate. Darran feels a feature is in order that revolves around dropping various systems from a determined height and then seeing which ones will work after they've been glued back together. Jon had his headphones in at the time so he didn't hear the discussion.



A BOOK OF TWO HALVES

Dear **Retro Gamer**,
I saw the Commodore 64 Collectors Book in WHSmith and thought: "a bit pricey, but it looks great", so I bought it. I got home and halfway through, I realised it was half ZX Spectrum!! I feel used and abused and disappointed, I felt like a deflated balloon.

I've had a commodore 64/1541 since the mid-Eighties, where you were either a Commodore or Spectrum owner, so I wasn't expecting it to be split. I should have looked I suppose, but is it aimed at folks who haven't had them as long as me, more modern collectors who'd have both? I dunno… Anyway, the Commodore 64 side was good.
Ray



We're sorry that you didn't realise the book was devoted to both systems. It states it clearly online, but it's clearly less obvious on store shelves. We're glad that you enjoyed the book though, even if it was only half of it.

DATING GAMES

Hello **Retro Gamer**,
I love your mag since I discovered it a couple of years ago and I look forward to it dropping through the letterbox each month. It's the best thing since *Zzap!64* used to plop into the porch of my parents' house every third Thursday in the month all those years ago.

I'd love to know is how you find the exact release dates of games in your articles. I've often tried to find out when a particular C64 game was released back in the Eighties, but beyond the year of release there's often little more info to be found – especially for those early games from 1982 to 1985.

When talking about games it's often hard to place them in the exact context of the time they were released. A friend and I were trying to remember when he got his C64. He remembers that he had *Impossible Mission* as one of his first games, but that didn't seem to help as the box of the game says 1983, online sources seem to say 1984 but it wasn't reviewed in the UK press until early 1985! Another game he

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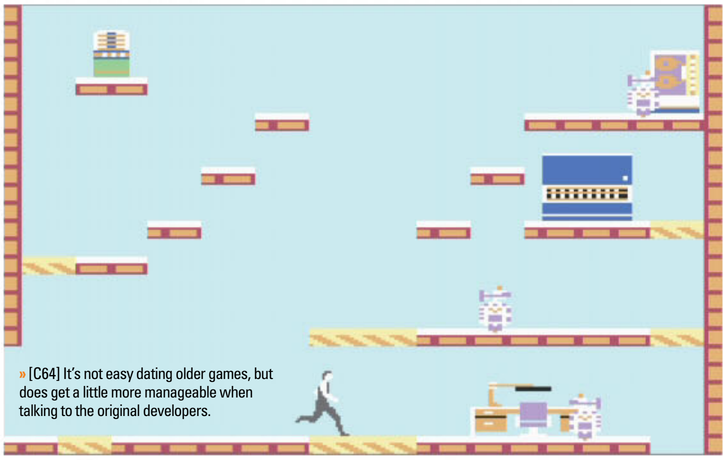
had was *Dropzone* – this is stated as having a 1984 release on most online C64 sites but it wasn't reviewed by *Zzap!64* until May 1985. I guess some games were released in the UK and US at different times and some UK based programmers made games for US based companies. Very confusing!

Is there a way of finding out the exact release dates of games? Is there a reference source such as a book or website or is there a way to track the release of a game through its barcode maybe (although some of the early games don't have these). If so, I would love to know.

Kind Regards

Martin Grundy

Dating games is a nightmare and there's no hard and fast rule, Martin. Like anything, research is the best way to discover when games come out, so we use a number of websites to cross-check magazine reviews or speak to the actual developer. Even that isn't guaranteed however, which is why we typically go for the year a game came out and not its full date.



» [C64] It's not easy dating older games, but does get a little more manageable when talking to the original developers.



» [PSP] It feels a little weird to cover games that were once reviewed in the actual magazine. It will happen one day, though…

PSP TOP 25

Dear **Retro Gamer**,

When will you be putting together a top 25 for Sony's PSP? It's over ten years-old now and deserves to receive more coverage, as it's a fantastic console with plenty of great games, both new and old.

Personally, I'd pick the following:

OutRun 2006 Coast 2 Coast
Ultimate Ghouls 'N' Goblins
Half-Minute Hero
Metal Slug Anthology
Metal Gear Solid: Peace Walker
Castlevania: Dracula X Chronicles
Monster Hunter Freedom Unite
R-Type Tactics
WipEout Pure
Patapon

Jason Hole

Hi Jason. While we're going to start getting some PSP coverage in the future classic section, it's going to be a while before you see a Top 25. There are far too many more systems that deserve that sort of coverage first. You've picked some great games though, which highlight just how much crossover there is with the retro community.



From the forum

» www.retrogamer.net/forum

Every month, **Retro Gamer** asks a question on the forum and prints the best replies. This month we wanted to know…

Your Favourite Yu Suzuki game?



greenberet79
Easy – *OutRun 2*. It brought up-to-date a classic game which was really showing its age. It managed to keep the fun and spirit of the original while at the same time injecting it with great graphics, updated music and sounds and some cracking tracks. A real exhilarating rush. Hard to believe it's so 'old' now.

joefish
Space Harrier - spectacular gameplay, beautifully bright fantasy creatures and an awesome soundtrack, and then there was that amazing moving cabinet that everyone said was hydraulic (when it wasn't).

Antiriad2097
Out of all the amazing games he has done nothing else has come close to the impact that the original *Space Harrier* made. From the gorgeous blue sky visuals to the absolutely sublime soundtrack everything about this game was just perfect. The first time I played it in an arcade I was just blown away.

lavalyte
Out Run is vastly better to play, but *Space Harrier* was a step up for all arcade games. Its visual impact was enormous and made me despair of ever being able to afford a home computer that could begin to replicate it.

ArchaicKoala
Going to have to go with the game that mixed two of my favourite mid Nineties fighters: *Fighters Megamix* + you can fight as the *Daytona Hornet*!

HalcyonDaze00
Virtua Fighter, the start of the best fighting game series there has ever been.

the_hawk
Without a shadow of a doubt *OutRun 2* probably one of the best arcade racers ever. From the classic Eighties/Nineties era it's got to be *Power Drift*. Big, chunky colourful fun, especially in the sit down hydraulic cab.

dste
Shenmue for me. Not much can be said about the game but on a personal level I spent hours playing it back in the day. I loved how you could wander round during the day and night doing things like collecting the toy capsules and music tapes or play on the arcade machines and consoles at the house.

gman72
The original *Space Harrier* for me. I like the big hydraulic cab version with booming speakers.

dCoding
Out Run, as it was a seriously impressive arcade cab.

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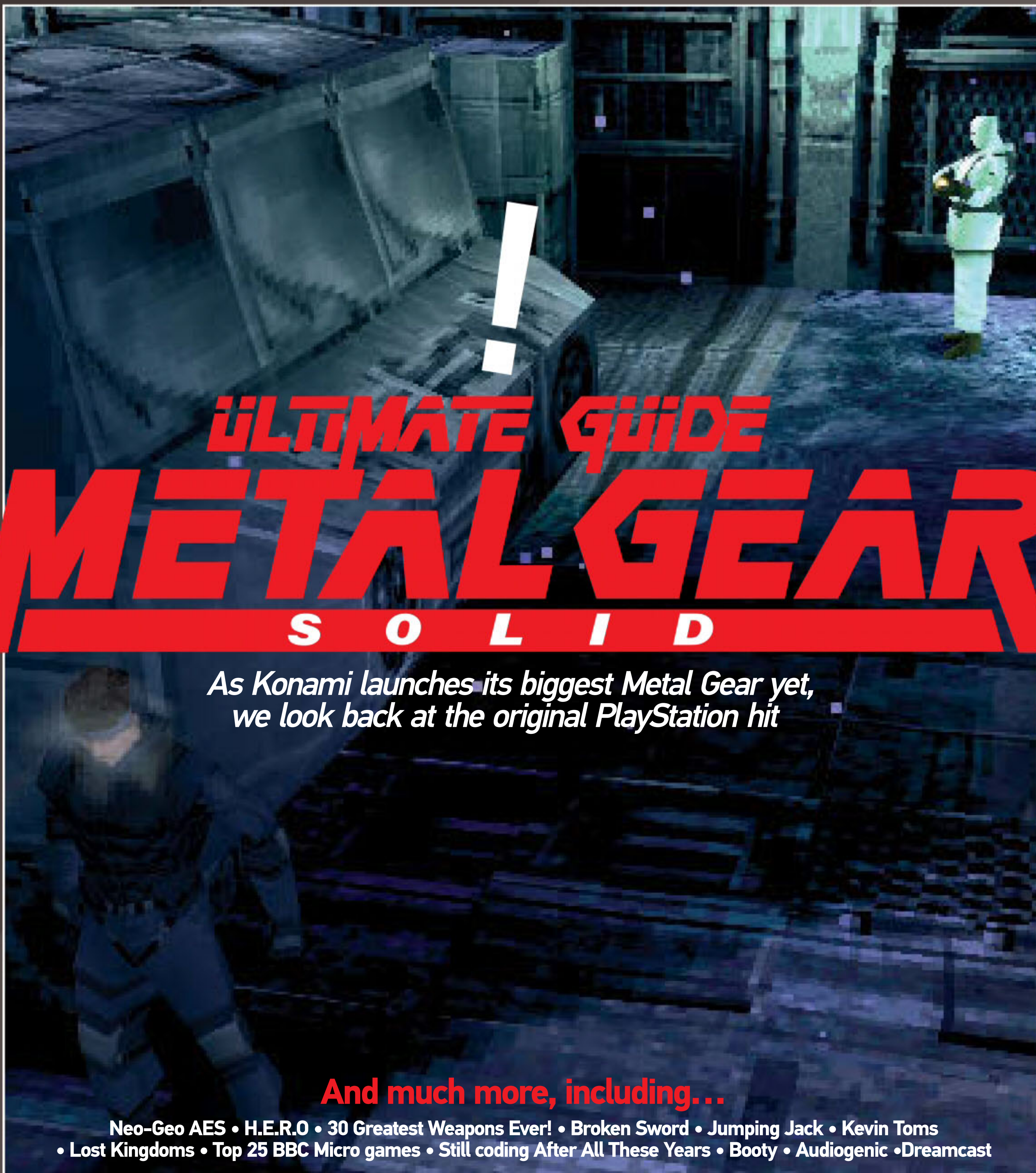
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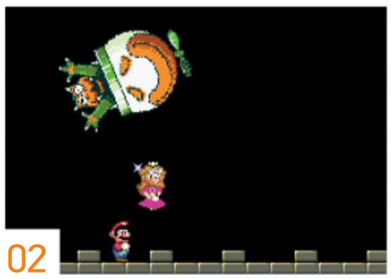
SUPER MARIO WORLD

» And so it once again comes to this – a dramatic final battle between Mario and his nemesis, Bowser. You'd think after all their clashes, Mario would have finally found a way to defeat the Koopa King once and for all, but the reptile keeps on turning up like a bad penny



01

» After booting Bowser's own weapons back at him, you've finally defeated the evil king. He's not at all happy about the turn of events and throws a fit, his eyes bulging comically as he senses his impending doom. Silly Bowser.



02

» That airship that Bowser's controlling looks pretty cramped, so we can only imagine where Princess Peach was hiding. With Bowser defeated the jig is up and he finally frees the princess before spinning off in a lovely Mode 7 effect.



03

» With Peach now rescued we're told that Mario's adventure is now over and that he, the Princess and Yoshi will be headed off for a vacation. Here's hoping Mario keeps a better eye on the Princess so she doesn't get kidnapped in the future. Hah.



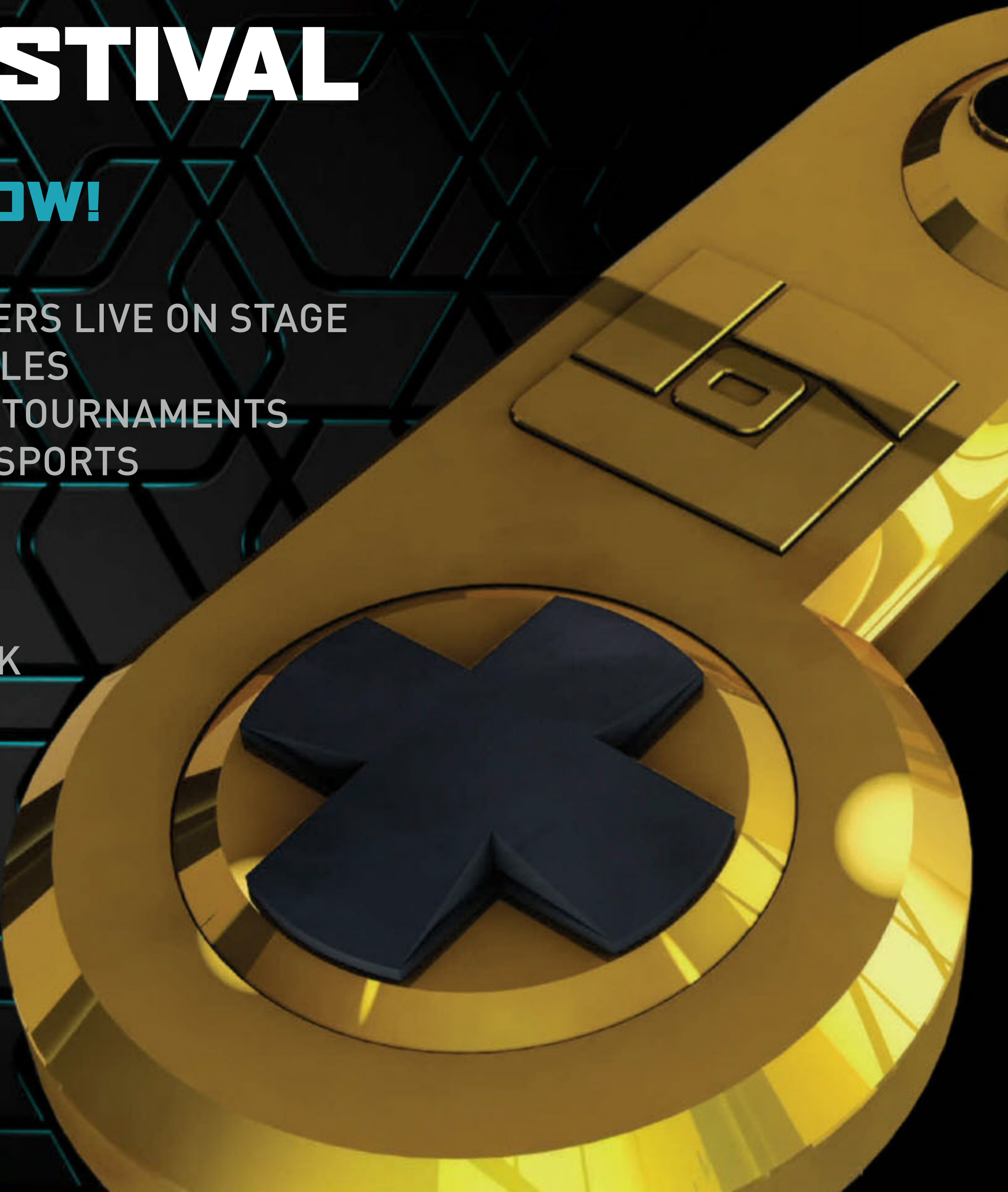
04

» Bowser is gone and Mario, Peach and Yoshi leave Bowser's castle, ready to start their new life. They're not alone, however, as the team have also rescued a number of baby Yoshis. Hopefully Yoshi doesn't have the parental tendencies of a hamster and decide that they'll make a tasty snack for the journey home.



05

» By the time Mario gets home the other Yoshis are waiting for him. A celebration is held and everyone is happy. Oh and what do you know? The eggs hatch as well, leaving a group of happy dinosaurs. We'd like to say that Peach and Mario adopted them and they all lived happily ever after, but Yoshi was hungry…




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